

Bob Smith (cc Bernabei, Hoch) re your 12/8 and enc. 12/7

12/9/71

Pursuit of the tracing of the pistol strikes me as a rather worthwhile research project. Perhaps you can also go further with the rifle order than Hoch and I have, but I think you may want to check my file on this. I also think Paul's recollection will be much better than mine on this. We worked on it together and he has copies of everything I have.

▲ general comment: Bernabei is an authentic expert, and I think you should send him a copy of your 12/7 memo with attachments (I have not time now to read the attachments but I respond in order that this not get forgotten in the press of too many things). What may seem reasonable on the basis of logic may not be on the basis of ballistics, for example. I am sending him the carbon of your 12/8 to me.

What Hoch and I have includes even the copies of the magazines the FBI dusted (negatively as I recall) from Alba and reports (inadequate) on the tracing of the magazines there. It seems to me that there was a mysteriously, pretendedly official visitor before the FBI.

An assortment of people, including Garrison and I think Sprague, have conjectured that some kind of explosive ammo was used. Leon Davidson postulated ice bullets. I see no reason for anything like these farout things, particularly not if the M-C was planted to be found and was not used, as is my belief. They needlessly complicate the entire affair and introduce (Bernabei can tell you if this is wrong) hazards in return for no gain. The most important single factor in a successful assassination, aside from the competence of the shooters, is true flight of the projectiles. Explosive bullets and things of that sort are not as dependable in flight and, with good marksmen, serve no real need. The weapon and the type of ammo used depend upon the conditions of the assassination. For example, if it were to be other than close (and any part of Dealey Plaza is close to the most remote part in terms of shooting) a small-calibre, high-velocity ammo is best, for the lighter weight of the projectile and its higher velocity give it a flatter trajectory over a longer range. And this kind of ammo, in the readily-available hunting or varminting varieties, is designed to mushroom and fragment on impact, a humanitarian consideration when used against animals. Larger calibres behave similarly, but they require more opposition in fragmenting and mushrooming. This remains relatively little opposition. As Bernabei explained it to me in the King assassination, the use of .30-06 rather than .243 in the Remington-Loft-Core line makes it more likely that the shot would be a success were the window of a car to have been between the shooter and the victim, the difference being accounted for by the greater mass of the .30-06 and the larger size of the projectile, tending to carry more of it to the target. He can probably explain this better than I, or you can see his explanation in my files.

It is my recollection that what I located in the Archives includes or fits what Hoch had that shows the torn part of the page is identical with the missing piece sent to Klein's. One aspect that may be worth further inquiry is the dependability of the handwriting analysis on which, as I recall, all that order hangs.

I also have a Remington catalogue you might find interesting. It pictures and describes all the ammo they make and gives the characteristics. I also have relevant pages from standard sources on the kinds of ammo that could have been used in the King case. Some may help.

First I would add this opinion: we have to get away from the hangup that military ammo was used in the crime. I do not believe it was and, aside from the alleged traces of copper found on the JFK clothing in back only, which does not mean military ammo but includes it, there is no evidence of which I know indicating that it was. The behavior, or the behavior as we have been told and as we have been able to reconstruct, indicates that it wasn't and it was the worst kind to use for that job. Until I can arrange the printing of POST MORTEM I am not disclosing all I have on this. The simplest persuasion is the spectro case. If it backed the official mythology, do you doubt for a moment they'd withhold it and force me to court on it? Rather would they be anxious for it to be known. And my work on the pictures I showed you and Jim summer before the one past has gone very far forward. The entire story is false. All of it, in all particulars.

There is another possibility in "late issue" other than currency in the ad, one I consider more likely. "Issue" has a special meaning in the military. I think as used in this ad it may well have been intended to mean a later model, one issued to the troops later.

On substitutions, particularly on inexpensive items bought by mail, I haven't used the mail-order houses much in recent years, but it was always the standard practise to substitute the similar if available when what was ordered was not. In those cases, it seems to me an order clerk included a printed or mimeographed form so stating or made a note on the copy of the order returned with the shipment. I think Klein's would have done something like this in the normal course of business. Of course, what is not lightly dismissed is the official failure to check it all out and provide a persuasive explanation. As I recall, it was either ignored or close to it.

One of the aspects of these ads that have always interested me is the purchase of junkier stuff than was necessary, better equipment being available in the same price range. And, if LHO had known what he was doing, he could have bought identical crap for less in Dallas and without leaving the traces mail entailed. The ads you copied show much better stuff for close to the same price, both rifles and pistols, so if he got what is attributed to him, he sure as hell didn't know what he was doing to begin with.

Another general comment, and this addresses the matter of explosive and other exotic bullets: I think successful assassinations require the greatest simplicity, in concept, execution and participants. The Sprague extension of Garrison is sheer insanity. Where could you find at least 50 (he had these on the scene!) who could escape detection and keep their mouths closed? And what was the need for them? Same with umbrella signals (a conjecture made easier by ignoring the second one!). What need? Or for radio? What is wrong with the first shot as all the signal needed, if any was? The more complicated we make all of this, the more we escape reality, confuse ourselves and frustrate success.

On Wecht: I also do not expect he will get access, but I regard it as the worst potential disaster if he should. There is too little political understanding and thinking. As of now there is relatively little we can learn from access to the film anyway, for we (meaning for the most part I, given the ethics and dependability of the critical community) know most of what it can show. And some of what it cannot. The many ways in which this can be counter-productive have not dawned on those who have not thought it through or lack the knowledge of fact that is requisite for doing it. It was a serious error on his part not to discuss this with me first, particularly because he was privy to some of my newer data and knew what I was working on and had an invitation to come here to examine all of it dating from the Halleck hearing. Perhaps in the days when we were restricted to the 26 and what any of us could extract from them such an approach, in vacuo, could be justified. But not now. So, despite my great respect for Cyril's competence and objectives, I am satisfied that his frustration in this endeavor is in our interest. In telling you this, I also tell you what you may not know, that I was the first to ask for access to this film, the day it was announced that it had been transferred. It took much to change my thinking.

Sincerely,


Harold Weisberg

to Mr. Harold Weisberg
Route 8
Fredrick, Md. 21701

**COMMITTEE TO
INVESTIGATE ASSASSINATIONS**

927 - 15th Street N.W., #409
WASHINGTON, D. C. 20005
Tel. (202) 347-3837

subject _____

date 12/8/71

message

Dear Harold:

Enclosed is something you may find of interest. By no means am I ready to draw any conclusions about any of this. I just want to call it to your attention in case you might have some other information that might somehow dovetail into it. My suspicions about the mail-order gunpurchases and the Dallas Cops' convenient "finding" of Klein's ads among Oswald's possessions/^{are} rather high, as you can probably tell.

Wecht has still not been granted access, at least as of about 10 days ago which is the latest I've heard.

signed *Bob Smith*

reply

date _____

signed _____

SENDER: Mail white and pink copies with carbon intact.

RECEIVER: Reply, retain white copy, return pink copy.

AMSTERDAM PRINTING AND LITHO CORP., Amsterdam, N. Y. 12010
Style #35160

WEISBERG

December 7, 1971

Memorandum for File

Subject: GUNG; ARTICLES & ADVERTISEMENTS IN AMERICAN RIFLEMAN MAGAZINE

From: R. P. Smith

On December 6, 1971 I spent several hours at the Library of Congress examining back issues of various magazines in an effort to track down the source of the advertisement by Seaport Traders, Inc. (Los Angeles) from which Oswald purportedly clipped the mail-order coupon (CE 135) and ordered a revolver, supposedly received by him in March, 1963 about the same time as the rifle was delivered. While the mail-order coupon for the rifle purchase was identified as having come from the February 1963 issue of American Rifleman (WR, p. 119; see also Sylvia Meagher, AATF, pp. 48-50 for several pertinent observations on this, particularly footnote 4), there does not appear to have been any corresponding identification of the source of the coupon for the revolver purchase. This coupon bears the code designation "AM-3", which commonly (but not always) represents the initials of the name of the magazine plus the month of issue. Notwithstanding such a strong clue, identification of the magazine was not accomplished by the Warren Commission or, to the best of my knowledge, by anyone else. I searched early 1963 issues of American Rifleman, Field and Stream, Guns & Ammo, Sports Afield, and one or two others without success. (There appears to be no well-known gun or hunting magazine with the initials "AM", but I have not yet examined all the possibilities by any means.)

However, in examining back issues of American Rifleman I ran across some other information of possible interest in regard to the rifle, both in respect to the advertisements and in respect to certain technical articles about ammunition and silencers which could conceivably have been used in the JFK assassination, whether in conjunction with the Mannlicher-Carcano rifle or some other rifle. I have made copies of some of this information as attachments to this memo. The following discussion is keyed to these attachments.

1. Attachments 1 and 2 are copies of the ads placed by Klein's Sporting Goods in the January 1963 and February 1963 issues of American Rifleman, the latter being the one corresponding to the "Hidell" mail-order coupon as indicated by the code designation "Dept. 358" as seen in CE 773. (Klein's ran advertisements regularly in all the various magazines that I examined, and apparently they changed the code designation in numerical sequence each time.) As pointed out by Sylvia Meagher (AATF, p. 48), the rifle shown in the February 1963 ad differs very appreciably, both in length and in weight, from that which was actually shipped to "Hidell", and it was apparently some months later, as in the November 1963 issue of Field & Stream (shown in Holmes Exhibit No. 2), before Klein's got around to advertising the 40", 7 lb. rifle that seems to have been shipped to "Hidell" in March 1963. Of the many Klein's ads that I examined for the first six months of 1963, every one that included the "6.5 Italian Carbins" (which is most of them) referred to a 36" rifle weighing 5½ lbs. I have not yet determined when the first appearance of the ^{ad for the} longer & heavier rifle occurred, but it seems almost certain that it was not before July 1963.

The possibility exists that Klein's exhausted their supply of the shorter rifle as early as March 1963 (resulting in a substitution being made in the "Hidell" shipment), but that the advertising department didn't get the word until later. Then too, "hobby" magazines of this type frequently are published a month or two ahead of their nominal issue dates, and the advertising copy has to be submitted well before the publication date. However, the tone of these ads ("LATE ISSUE", etc.), which was consistent all the way until June at least, seems to imply that a real effort was made to keep them current. Moreover, there is nothing in these ads to suggest that Klein's followed the practice of making substitutions without notifying the purchaser first.

RPS, 12/7/71

2. Attachment 3 is an article from the January 1963 issue of American Rifleman on the subject of explosive bullets. Bullets of this type genuinely explode on (or just after) impact; they are not mere "dum-dum" or inert fragmentation bullets. There is surprisingly little information on this type of ammunition in ordinary reference works (e. g., Encyclopaedia Britannica), although one can find a great deal of information about explosive ordnance for larger caliber weapons.

This article is the first positive confirmation that I have found showing that ammunition of this type is practical for standard rifle calibers. It may be significant that all the developments described in the article are of World War I vintage. I assume such ammunition, like dum-dums, was banned by the Geneva Conventions (1920's), although obviously this would not deter assassins.

It is interesting that several nations, including the U. S., have had such ammunition in their arsenals in the past, and that Italy in particular (p. 24 of the article) had an explosive bullet for 6.5 mm weapons. Although the bullets, as shown in the chart, are often of distinctive shapes or bear distinctive markings, the cartridge cases appear to be of standard design in many cases. In several instances, the only distinguishing feature may be a color marker of some kind, which of course could be removed. Thus the characteristics of the cartridge cases would not be a reliable guide as to the nature of the bullet. (A subsequent article by the same author in the March 1963 issue dealt with "incendiary" bullets and brought out exactly the same problem in identifying those.) Note also that some American manufacturers (Remington, Winchester, & Frankford Arsenal) were involved in the fabrication of explosive bullets, in one instance on behalf of a hostile foreign nation (Austria) in World War I, incredible as that may be. The author of the article presents this information very matter-of-factly in the third column of p. 22.

I am unable to estimate just what kinds of fragment or residue such bullets would leave in or near the target. My hunch is that the fragments would tend to be very small particles or slivers, but much depends on the nature, amount, and physical design of the explosive charge. Conceivably, in some designs, the bullet might disintegrate somewhat like a grenade, producing several "chunks" rather than tiny particles. In any case, I would expect that ballistic identification would be rather difficult. Moreover, the larger particles would probably be dispersed to appreciable distances in all directions rather than following the approximate flight-path of the initial trajectory.

Considering how old the information in this article is, and how many advances in technology have occurred since World War I, one can only speculate what kinds of new development in explosive ammunition may have taken place in recent years. Such developments would almost certainly have been kept well hidden under the cloak of security classification in view of the existence of international agreements to restrict the use of such weapons.

3. Attachment 4 is a short article from the same issue on "silencers". Again, as the article notes, there are problems in getting information on this subject. However, their existence for rifles as well as handguns is confirmed by this article, even though their effectiveness for rifles is somewhat dubious. It may be worth noting that even though the "crack" of a supersonic bullet cannot be silenced, the muffling of the sound from the muzzle (or chamber) might be of considerable value in concealing or disguising the location of the rifle to ear-witnesses. The marked paragraph in the second column is also of interest in showing that security classification enters into the question of availability of information on these devices. The reference to "semi-military purposes" is especially intriguing.

4. All of this information was published in the same magazine, and at about the same time, as that from which Oswald purportedly clipped a Klein's coupon and ordered the Mannlicher-Carcano rifle in March 1963. This was well before he could have seen the magazines at the Crescent City Garage in New Orleans (CE 1933).

RPS

RECEIVED TOO LATE FOR HUNTING SEASON KLEIN'S LOSS IS YOUR GAIN! SAVE NOW! BUT HURRY!

Cash or Credit
NO
MONEY DOWN
30 DAY FREE TRIAL

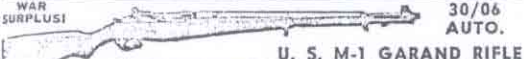
PRICE SLASHED!



U. S. SPRINGFIELD M1903—30/08

SPRINGFIELD M1903'S! LIMITED QUANTITY! Most popular military rifle for sporting use of them all... and this lot are all Model 1903's!... **\$36.38**

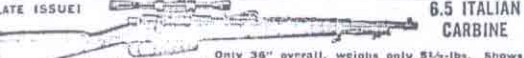
WAR SURPLUS!



U. S. M-1 GARAND RIFLE

Finest lot we've seen! Limited quantity! Famous World War II automatic rifle in popular 30/06 caliber. 8-shot, 24" barrel, 42" overall. Adjustable sight. **\$89.95**


LATE ISSUE!



6.5 ITALIAN CARBINE

Only slight war, lightly used, fast fired and head spaced, ready for shooting. Turned down bolt, thumb safety, 6-shot, clip fed. **\$12.88**

SPECIAL PURCHASE! TOP QUALITY! TASC0 VARIABLE POWER SCOPE! . . . 3X TO 9X



Brand new! . . . First quality! . . . Made by Tasco! With a twist of the wrist you can have any power you want from 3 to 9 Field of view 1.4-ft. to 30-ft. **\$34.88**

SALE! New Matador 10 Gauge Magnum



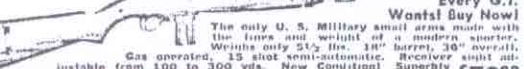
SAVE 50% NOW! But hurry—they won't last! Brand new famed Financier International MATADOR 10 gauge (3 1/2" shell) Magnum Shotgun. **\$129.50**

SALE! NEW WINCHESTER FEATHERWEIGHT AUTO SHOTGUN 12 Gauge



SAVE over \$40. Brand new Winchester Model 50 FEATHERWEIGHT Automatic Shotgun. **\$98.77**

BRAND NEW! U.S. M1 .30 CALIBER CARBINE



The only U. S. Military small arms made with the time and weight of a modern sniper. **\$78.88**

SHORTWAVE-AM-MARINE PORTABLE RADIO!



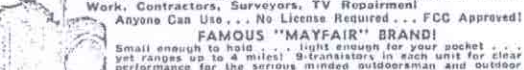
Plays Over 300 Hours on Inexpensive Flashlight Batteries! Includes Genuine Cowhide Leather Case with Carrying Strap. **\$39.95**

NEW! FINEST 9 TRANSISTOR WALKIE-TALKIE




Perfect for Hunters, Fishermen, Farmers, Campers, Police Work, Contractors, Surveyors, TV Repairmen! **\$49.88**

FAMOUS "MAYFAIR" BRAND!



Small enough to hold in your pocket... yet ranges up to a mile! 9-transistors in each unit for clear performance. **\$49.88**

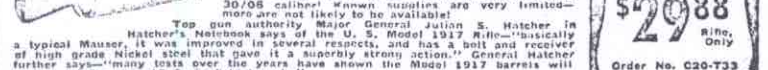
WAR SURPLUS!



U.S. MODEL 1917 RIFLE

ALL MILLED PARTS—ALL N.R.A.—Very good or better!

LAST CALL! HURRY!



\$29.88

Order No. C20-T733

BRAND NEW! FIRST QUALITY! 30-30 or .35 Rem.



DELUXE MARLIN 336C!

With RECOIL PAD... SWIVELS... SLING... **\$69.88**

SPECIAL WAR SURPLUS PURCHASE!

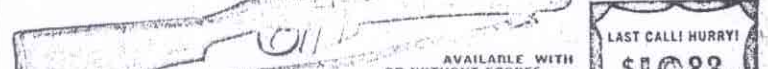


ENFIELD SPORTER

.303 British Caliber

AVAILABLE WITH OR WITHOUT SCOPES... **\$19.88**

NEW HI-STANDARD .22 DERRINGER



Shoots 22 rim-fire from .88" cap to long R.F. barrels. **\$29.95**

.38 S & W ENFIELD



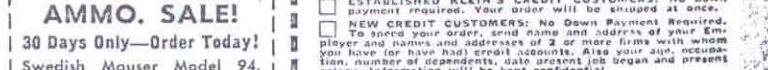
Double action only 26 oz. 6 shot, 10 1/2" over. **\$12.98**

NEW! '63 GUN DIGEST



World's Greatest GUN BOOK Now with 5 FREE **\$3.95**

AMMO. SALE!



30 Days Only—Order Today! Swedish Mauser Model 94, metal jacketed, 159 gr. military 6.5 x 55mm ammo. **\$7.88**

Klein's

MAIL TODAY! IMMEDIATE DELIVERY!

KLEIN'S—Dept. 358

227 W. Washington St. Chicago 6, Illinois

100% MONEY BACK GUARANTEE!

RIFLE CALIBER EXPLOSIVE CARTRIDGES

By CHARLES H. YUST, JR.

RIFLE-caliber explosive cartridges form a very interesting group which it is quite possible for anyone to add to his collection. It is only necessary that extreme caution be practiced when encountering any cartridges of which there is the slightest doubt as to identity, especially those that have unusual-appearing bullets.

While explosive cartridges are safe enough to have in a collection, the nature of this type of ammunition must always be borne in mind, along with the possible effects of time.

Never probe bullets

Some of this class are of hollow- or open-point type. Never, under any circumstances, thrust any object down this opening. Never use pliers or other tools on bullets that have copper or lead tubes in the nose, or use tools on those with mechanisms, such as the U. S. Spot-Light types or the Austrian Anti-Balloon Round.

Do not drop explosive cartridges. While they are intended to withstand ordinary handling in the field, age may have had a deteriorating effect on some of the components, and a drop may be enough to explode them. Also, do not use an inertia-type bullet puller—the blows could be enough to actuate the mechanism.

Some collectors like to section bullets to study their construction. Unless you are well versed in such procedure and have the proper safety equipment, confine this sectioning to the large variety of inert-type bullets. Those who like to shoot should refrain from firing explosive cartridges.

The Argentine 7.65 mm. Type R high-explosive cartridge (Fig. 1) is identified by a black bullet tip and black primer annulus. Bullet jacket is cupronickel clad steel. The round was manufactured for Argentina by Hirtenberg Patronenfabrik in Austria.

So far as known to this writer, Austria had in service 4 types of explosive

cartridges for 8x50R Mannlicher rifles and machine guns. All these were used in World War I, and one of them was introduced as far back as 1910.

Explosive cartridges Model 1910 and Model 1914 (Fig. 2) are known as *Einschusspatronen* (sighting cartridges), intended for observing point of impact, supposedly in training. They were manufactured at the government arsenal at Wellersdorf.

These are very hard to distinguish from the ordinary ball round as the bullet has the same general shape. For identification a colored band was placed around the cartridge case just below the shoulder. However, this band could be worn off. If the bullets are removed from the case, it will be noted that they are considerably longer than the ordinary ball bullet.

The Model 1910 cartridge has a red band around the cartridge case. The bullet jacket is gilding metal, but coated so that it looks like the ordinary steel-jacketed ball bullet. The portion of the bullet seated below the case mouth was not coated. The base of the bullet is

marked —. The explosive in this cartridge consists of potassium chlorate and antimony sulphide.

Model 1914 cartridge

The Model 1914 cartridge has a black band, and the bullet jacket is steel. The nose of this bullet has a small, flattened projection which is also an aid in identification. Base of the bullet is marked —. The explosive is compressed blackpowder mixed with aluminum.

The third cartridge in the Austrian series is known as an air burst shrapnel (Fig. 3). It appears to have been introduced later in World War I, because the cartridge is headstamped 1917. It can be identified by the flat-nose, hollow-point bullet. The mouth of the cartridge case is crimped. In 1917 a crimp

to hold the bullet more tightly was included for use in machine guns.

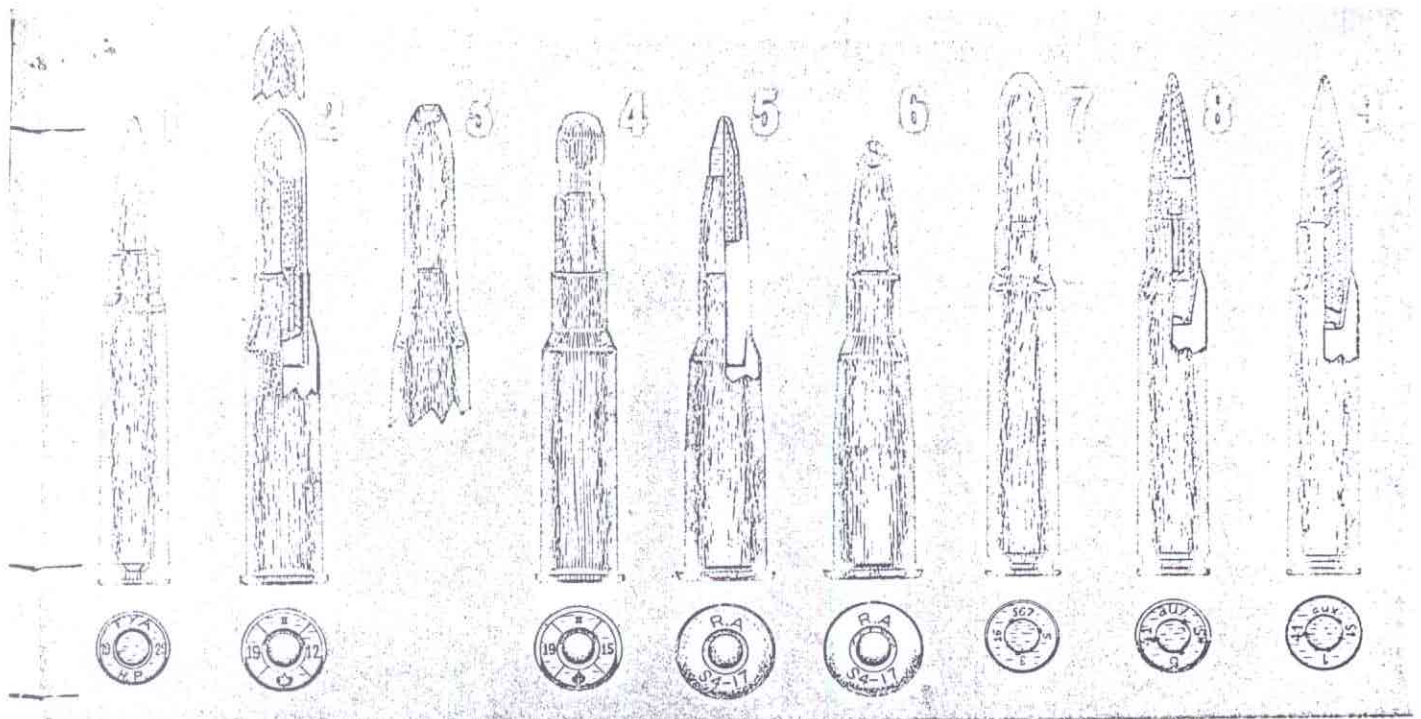
The last of the Austrian cartridges is known as an anti-balloon round. There were 2 patterns, which at first glance look alike as they have practically the same external dimensions. The first pattern (Fig. 4) is headstamped "1915" and the bullet length is 1.425". The cartridge case is not crimped to hold the bullet. The second pattern is headstamped "1916" and the bullet length is 1.305". The cartridge case is crimped to the bullet. Shape of the case for this round is slightly different from that of other 8x50R Mannlicher rounds. It is still 50 mm. long, but the neck was made longer by shortening the shoulder, to give more bearing surface around the bullet. It is not known certainly if this cartridge was intended for use in rifles, in machine guns, or both. The first time this writer saw such cartridges they were loaded in a number of regular Mannlicher rifle clips.

There are 2 patterns of spot-light cartridges in 8 mm. Lebel. The first pattern has a hollow lead-pointed insert in the bullet nose (Fig. 5). The explosive must be sensitive, as it detonates on impact. The second pattern (Fig. 6) has an unusual appearance. The explosive is placed in the cavity in the bullet nose and the cavity soldered closed.

The cartridge cases were made by Remington Arms-Union Metallic Cartridge Co., at their Swanton, Vt., plant. The bullets were altered from the regular solid *Bulle D*. The first pattern was altered and loading completed at Frankford Arsenal; it is not known where the second pattern was completed.

Three German explosive types follow. A 7.92x57 mm. explosive round was introduced during World War I (Fig. 7) which, at first glance, could be mistaken for the old Model 1888 round-nosed ball cartridge. However, the bullet has a hollow point and the bullet

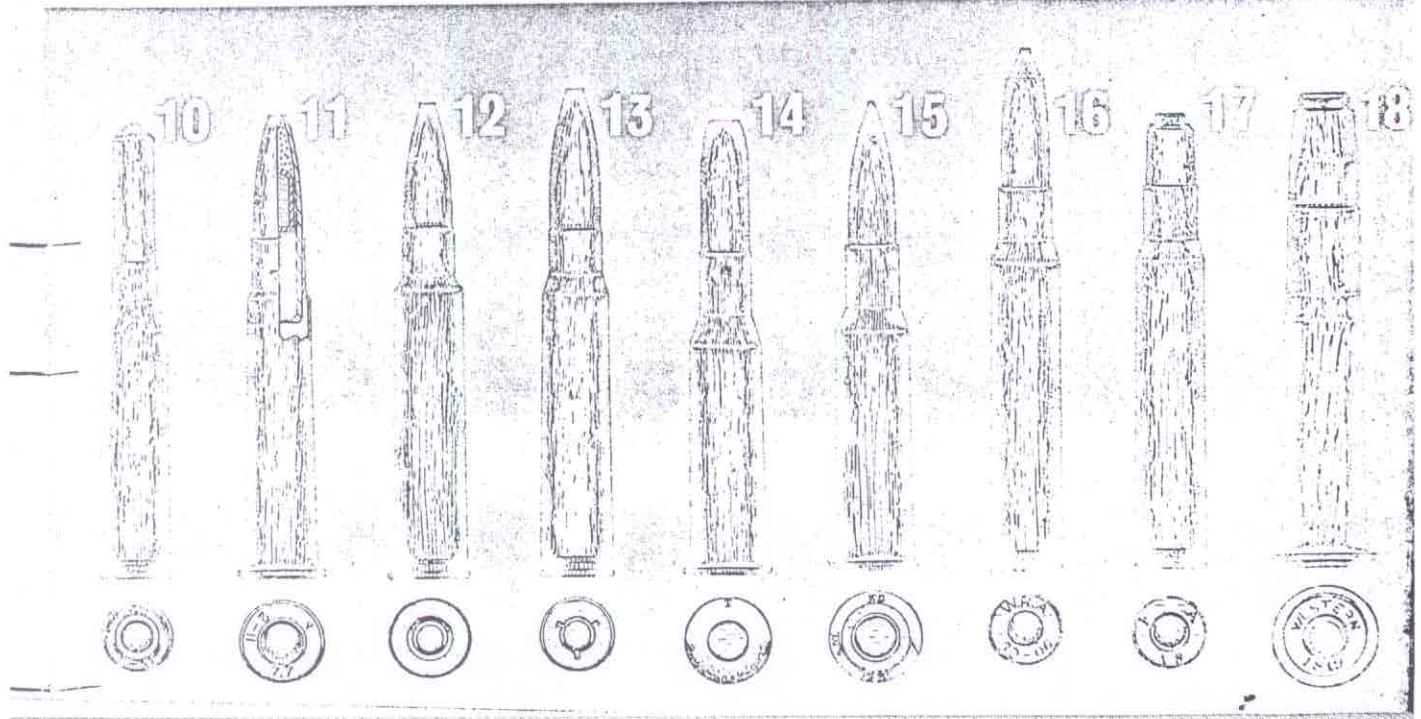
Continued on page 24



FIGURES

- 1 Argentine 7.65 mm. Type R High Explosive Cartridge
- 2 Austrian Sighting Cartridges. (at top) Model 1914. (below) Model 1910
- 3 Austrian Air Burst Shrapnel Cartridge (bullet only)
- 4 Austrian Anti-Balloon Cartridge
- 5 8 mm. Lebel 'Spot-Light' Cartridge, first pattern
- 6 8 mm. Lebel 'Spot-Light' Cartridge, second pattern
- 7 German 7.92x57 mm. Explosive Cartridge, World War I
- 8 German 7.92x57 mm. *B-Patrone* Observation Cartridge
- 9 German 7.92x57 mm. "S.m.K. L'spur Ub. m.Z." (Practice Ball with Steel Core and Self-Destroying Tracer)

- 10 Italian 6.5 mm. Explosive Cartridge
- 11 Japanese Navy 7.7 mm. Rimmed Explosive Cartridge
- 12 Japanese Army 7.7 mm. Semi-Rimmed Explosive Cartridge
- 13 Japanese Army 7.92x57 mm. Explosive Cartridge
- 14 Imperial Russian 7.62 mm. Explosive Cartridge
- 15 Soviet Russian 7.62 mm. Explosive Cartridge
- 16 U. S. .30 Gov't M1906. H.E. 'Pomeroy' Explosive Cartridge
- 17 U. S. .30 Gov't M1906. H.E. 'Spot-Light', Experimental Cartridge
- 18 U. S. 11 mm. Machine Gun. H.E. 'Spot-Light', Experimental Cartridge



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THE National Rifle Association makes available to its members useful and valuable information on firearms and ammunition and their use, in the form of NRA Illustrated Handbooks, RIFLEMAN Reprints, and Range Plans.

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NRA Illustrated Handbooks contain selections of the best material on various subjects that have appeared in article form in THE RIFLEMAN in recent years.

Firearms Assembly Handbook	\$2.50*
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Shooting Handbook	\$3.50*

* Price to NRA members, postpaid from NRA Headquarters. Price to non-members, add \$1.

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RIFLEMAN Reprints are smaller booklets that contain selected articles giving a wealth of practical information on specific arms or types of arms.

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Remodeling The .303 Lee-Enfield Rifle	50¢
Remodeling The U. S. Model 1917 Rifle	50¢
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Range Construction—Part-Time And Special	\$1.00
Range Location And Landscaping	10¢
Running Deer Ranges	50¢
Safety Ranges And International-Type Ranges	\$1.00
Universal Outdoor Smallbore Rifle Target Frame	10¢
You Can Have A Place To Shoot	25¢

Available from National Rifle Association, 1600 Rhode Island Ave., N.W., Washington 6, D. C.

jacket is uncoated steel. Most rounds found today will probably show signs of rust. There should be a black primer annulus, but this could be worn away.

Shortly before World War II, the Germans adopted an explosive incendiary cartridge known as the *B-Patrone*, or observation cartridge (Fig. 8). On German ammunition charts and lists, it was always included with training cartridges and not with Service cartridges. The bullet jacket is gilding-metal-clad steel. Inside the nose was a compartment filled with white phosphorus. This was followed by a lead sheath which contained a detonator backed by a firing pin. There is a lead plug in the base of the bullet. There is no weep hole leading to the phosphorus as in a regular incendiary bullet.

Rounds of early manufacture had a chrome-tipped bullet for identification, then a silver-tipped bullet. The last, and most often seen, had the lower portion of the bullet stained black leaving the tip unmarked. Additional marks may be encountered, such as a thin green band near the point which indicates a high-velocity round; or a lacquered band at case mouth (very hard to see) which indicates tropical loading; or both. This bullet was loaded into brass and steel cases. The primer annulus was black.

There was another training cartridge employed by the Germans that contained an explosive element. This was known as "S.m.K. L'spur Ub.m.Z.", which can be broken down to mean, "Practice Ball with Steel Core and Self-Destroying Tracer" (Fig. 9). The bullet has the usual gilding-metal-clad steel jacket. The jacket contains a lead sheath, carrying a short steel point. Behind this is a container which tapers into a teat that contains an explosive, behind this another container with tracing mixture. This bullet explodes when the teat end of the explosive container, as a result of burning of the tracer, transmits the heat through the thin wall of the teat to the explosive.

This round is identified by about $\frac{3}{4}$ the distance from the point of the bullet to the case mouth being blackened. These bullets also were loaded into brass and steel cases.

Italian explosive cartridge

An explosive cartridge was manufactured in Italy during World War I for Italian 6.5 mm. weapons (Fig. 10). It is not hard to identify due to the unusual shape of the cupronickel jacketed bullet, which also has a small hollow point. Inside is an explosive charge and detonator backed by a firing pin.

Japan had a series of explosive rifle-caliber cartridges, all with the characteristic that the bullet had a flat nose.

The Japanese Navy 7.7 mm. rimmed cartridge (Fig. 11) was for use in Naval aircraft machine guns and ground machine guns. It could also be used in British .303 rifles and machine guns, because it had the same external dimensions as the British .303 cartridge. The bullet of the explosive round had a cupronickel jacket. The front compartment inside the nose contained cyclonite and PETN. To the rear of this is a gilding-metal cup filled with aluminum and cyclonite, or alternatively aluminum and TNT. This is backed by a lead plug. This is the general arrangement of the whole series of Japanese explosive bullets of rifle caliber. The primer annulus is violet.

The Japanese Army 7.7 mm. semi-rimmed explosive round (Fig. 12) has a flat-nosed, gilding-metal-jacketed bullet. There was a black identifying band around the case mouth. It has also been reported that there was an explosive round with the 7.7 mm. rimless cartridge series. This would look like Fig. 12, except for a smaller case head.

There was an explosive round of the Japanese Army 7.92x57 mm. cartridge (Fig. 13). This has a flat-nosed, gilding-metal-jacketed bullet, and there was a white identifying band around the mouth.

Russian explosive cartridge

Imperial Russia had an explosive cartridge for 7.62 mm. rifles and machine guns (Fig. 14). This cupronickel jacketed bullet has a flat nose with broad and shallow hollow point. The copper detonator container is visible. There is a firing pin and explosive included.

Soviet Russia also had an explosive incendiary cartridge in the same caliber (Fig. 15). The front of the bullet contained thermite powder, followed by a lead sheath containing a detonator backed by a firing pin. A lead plug is in the base. The gilding-metal-clad, steel-jacketed bullet was pointed just like the ball bullet. This cartridge was identified by a red or red-and-green bullet tip. Cartridge cases were either brass or copper-coated steel.

The rifle-caliber explosive round was also attempted by the United States.

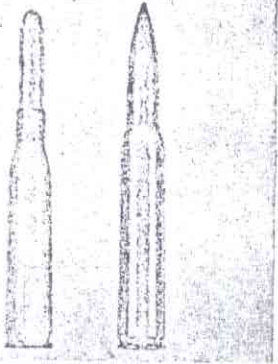
A .30 Gov't M1906, H. E. 'Pomeroy' cartridge (Fig. 16) was made by Winchester for the Government. The bullet had a pointed copper tube inserted in the front end, which contained an explosive. This can be identified by the shape of the point and its green tip.

The last 2 cartridges are the U. S. .30 Gov't M1906 H. E. Spot-Light round (Fig. 17), and the 11 mm. Machine Gun H. E. Spot-Light round (Fig. 18). These are quite easy to identify by the unusual appearance of the bullet. Both were experimental.

6.5X58 "P" CARTRIDGE

Please identify a rimless bottleneck rifle cartridge marked "DWM 457" and "K" ("K" on either side of head). This cartridge is about cal. .25, has a long tapered case shoulder, and a long round-nose bullet. To what rifle is it adapted?—S.C.

Answer: The cartridge is a commercial version of the 6.5 mm. Portuguese cartridge made in Germany by DWM. It is commonly called 6.5x58 Mauser or 6.5x58 "P" (case length is 58 mm.). "K" is for Karlsruhe, where the DWM ammunition plant is located, and "457" is the DWM identification number for this cartridge.



6.5x58 "P" (1.) and .30-'06 cartridges

This cartridge is adapted to the 6.5 mm. Portuguese Mauser-Vergueiro Model 1904 military rifle and to 6.5x58 Oberndorf Mauser sporting rifles. Its long round-nose bullet weighs 155 grs., and the muzzle velocity with 25.6" barrel is 2568 f.p.s. (feet per second).—L.O.

SILENCERS

How do rifle silencers work, and how effective are they? Why are they not generally used?—D.E.V.

Answer: One of the very first successful firearm silencers was developed by Hiram Percy Maxim, a member of the famous American family of inventors.

Silencers operate by trapping the powder gases at the muzzle and releasing them over a little time. While this time is very short, it is enough to lower and lengthen the pressure peak of the escaping gases, thus largely doing away with the resultant sharp report. Maxim originally believed that for effectiveness the gases had to be given a whirling motion through passages around the inside of the silencer, and his first successful silencer was designed on this basis. Experience showed that this was not necessary, the requirement for effectiveness being only that the gas escape slowly. The principle is exactly the same as that of the internal combustion engine muffler. Of course, there must be a hole through the device in the projectile's path.

Trapping the muzzle gases and releasing them over a little time results in slowing them. The force required to do this necessarily involves an equal and opposite forward reaction force on the firearm, decreasing the recoil. A silencer thus acts also as a muzzle brake.

A good silencer can be remarkably ef-

fective in muffling the escaping gases. It may even eliminate nearly all noticeable sound from a small powder charge, leaving only the sound of the gun hammer or striker and of the bullet impact on the target to be heard. The silencer has, however, some major limitations.

One of the greatest is that while noise from the powder gases leaving the muzzle can be muffled, nothing can be done to silence the loud crack made by projectiles passing through the air at speeds higher than that of sound. Even at transonic speeds the projectile makes a considerable noise. The effectiveness of silencers is therefore limited to guns firing projectiles well below the speed of sound.

Silencers are less than effective on revolvers because they do nothing to muffle the gas escaping at the cylinder joint. They are also ineffective on those self-loading arms which open while there is still some pressure in the barrel, since both gas from the opening breech and also the moving mechanism make a noise.

There are also the disadvantages of a device attached to the gun muzzle, where weight and bulk are most inconvenient.

Some United States patents which have been issued on silencers are Nos. 880,386; 1,018,720; 1,207,264; 1,259,251; 1,482,805.

The silencer was given a military application during World War I, when a sniper model of the M1903 Springfield rifle was made with a Maxim silencer and a Warner & Swasey telescope sight. The rifle was very awkward, partly because of the silencer and partly because of the telescope sight design, and there was of course the inability to silence the bullet crack which has been explained above.

Silencers were employed during World War II on some small weapons used by various nations for semi-military purposes. These were classified, and no detailed information is available on them.

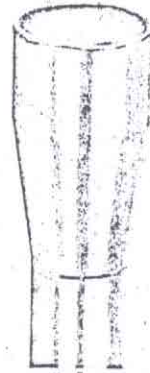
Silencers for sporting guns were produced by the former Maxim Silencer Co. over a period of many years. There appears to have been a rather steady demand, but never a very great one. That company discontinued the manufacture of silencers about 1925 as being unprofitable. Manufacture was then taken up by 2 or 3 small manufacturers, but without much success.

Now the only known source of gun silencers is Parker-Hale Ltd., Whittall Street, Birmingham 4, England. Parker-Hale calls these devices sound moderators, and manufactures them for cal. .22 weapons only.

The most important limiting factor is now the regulation of silencers by law. The National Firearms Act includes silencers among the weapons and devices which must be registered with the Alcohol and Tobacco Tax Division of the Internal Revenue Service, with payment of a tax of \$200. Payment of \$200 tax must be repeated at each transfer of the item. Also a tax of \$200 must be paid by the maker (other than established firearms manufacturers, who are licensed separately) on each such item made. Also there are restrictive state laws on silencers.

Because of the severe regulation of these devices, THE AMERICAN RIFLEMAN has not developed information or data on making firearms silencers.—E.H.H.

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