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THE LUGER

Pistole Parabellum



THE LUGER STORY

The Luger story actually has its beginning with the Henry-Winchester Rifle! Hiram Stevens Maxim, 1840-1915, one of America's true inventive geniuses and one of the greatest arms inventors of all time, turned his attention in the early eighties toward the development of an automatically operated firearm. Numerous mechanically operated arms had been developed, such as the hand cranked Gatling gun but Maxim envisaged using the recoil to operate a gun automatically. He did so in 1883 by using a standard lever action 1866 Winchester Rifle, to the stock of which he attached a movable spring loaded false butt plate. He connected this plate to the lever trigger guard through a series of jointed levers. The recoil of the rifle compressed the spring between the butt plate and the stock which opened the trigger guard, ejected the empty case and cocked the rifle. The reaction of the compressed butt plate spring working through the levers closed the action, chambered the cartridge and the rifle was ready for the next pull of the trigger. Although he used the toggle action Winchester, the basic principle of recoil action was his. This was the first successful automatic operating firearm.

From Maxims' first use of the toggle action and recoil operation he went on to develop the Maxim Machine Gun which proved to be very successful and was adopted by many countries. This machine gun used the toggle, knee, or "Grass Hopper" action principle.

Credit should be given when due so we must at this point mention that the toggle action of the Henry-Winchester was preceded by the Volcanic pistol and rifle. The Volcanic system was invented by Lewis Jennings, patented December 25, 1849, Patent No. 6973, and first manufactured by Robbins and Lawrence.

BORCHARDT

Hugo Borchardt a naturalized American citizen developed the toggle action system on which the Luger was based. It is reasonably certain that he conceived this action while working in the United States. It is known that he was working for firearms manufacturers as early as 1874, and at one time worked for Winchester in Hartford, Connecticut. He was quite a mechanical genius and is credited with the invention and patenting of a number of items, including the Sharps-Borchardt Breech Loading Rifle. This was his greatest achievement while working in the U.S.A.

Borchardt returned to Germany in 1893 although he remained an American citizen. He went to work for Ludwig Loewe, an arms manufacturing firm in Berlin. He finalized the development of his automatic repeating pistol, Borchardt Patent, while working for this firm and obtained a patent in Germany September 9, 1893, Patent No. 75,837. He obtained patents in most other important countries during that same year and in the United States on November 10, 1896.

Several features of the Borchardt pistol were so ingenious that they have been used in most automatic pistols manufactured ever since. The Borchardt carried its cartridges in a magazine housed in the butt. A short recoil operated lock mechanism was used, with the breech block

locked to the barrel at the time of firing. The breech block was unlocked by a toggle-joint action which moved freely after the breech block and barrel had recoiled together a short distance. The toggle-joint "broke" vertically which released the breech block and allowed it to slide towards the rear. The bottle necked cartridge was also an innovation. The caliber 7.65 Borchardt cartridge with its smokeless powder charge was quite powerful and proved to be the forerunner of the famous .30 or 7.63 Mauser pistol cartridge. We will cover the pistol and cartridge in more detail later.

Although the Borchardt pistol was the first automatic pistol to be truly successful commercially, it was not an outstanding success. It was efficient but clumsy. Ludwig Loewe (and later D.W.M.) manufactured them and a number were sold but it was not received enthusiastically by the military of any government, including that of the U.S.A.

LUGER

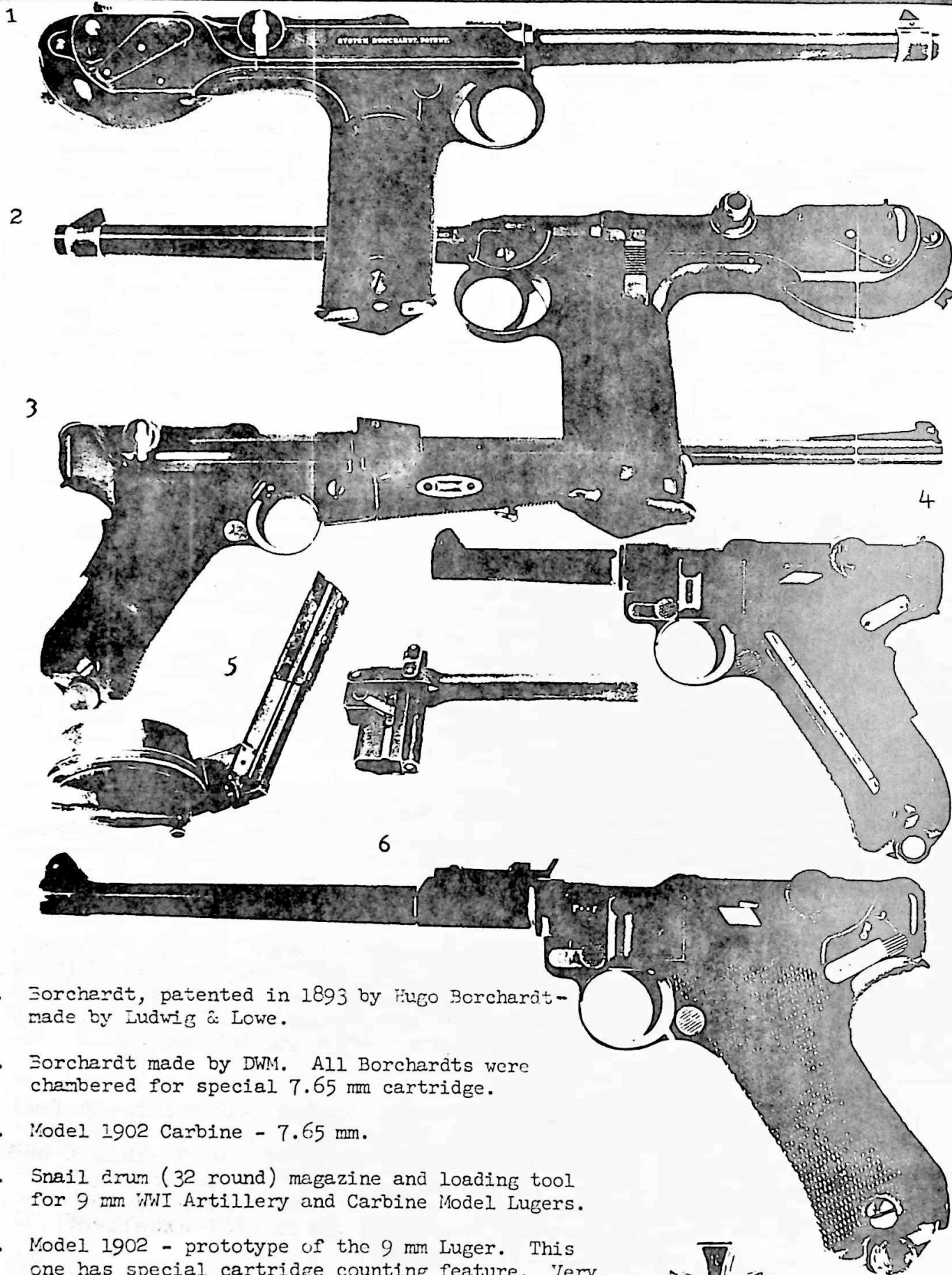
At this point Georg Luger comes on stage. He was born at Steinach, Austria, in 1848. After serving in the Austrian army for a time we are told that he worked with the famous Ferdinand Ritter Von Mannlicher, helping in the design of several Austrian rifles, particularly the Werndl. In 1891 he was employed by Ludwig Loewe, Berlin. There is some controversy as to just where and when Luger and Borchardt first met - - it could have occurred in the U.S.A. for Luger made several trips to the States in conjunction with U. S. Ordnance tests of various arms in the 1890's. In any event they did meet and work together at the Ludwig Loewe plant in Berlin. As a matter of interest, Georg Luger, while working for Loewe brought the Borchardt pistol to the U.S.A. in late 1894 and attempted to interest our navy in adopting it. He was not successful.

In 1896 Ludwig Loewe and a well known German ammunitions manufacturer, Deutsche Metallpatronenfabrik (DMK) of Karlsruhe, merged to form a new company. The new small arms and ammunitions firm thus established was called Deutsche Waffen und Munitionsfabriken. This was the famous DWM of which you will almost always hear when talking with Luger collectors about their hobby.

Both Borchardt and Luger were top engineers for DWM. Georg, however, went on his own to design a pistol which had many features strikingly similar to the Borchardt. His design, however, included numerous and very important improvements. He filed for a patent on March 17, 1900. His first patent was granted by England in 1900 and by the U.S.A. in 1904, Patent No. 75,414.

The first Luger and all of those made after it had two excellent features that made it a success whereas the Borchardt was not. Georg Luger eliminated the bulky recoil spring housing of the Borchardt and slimmed and slanted the grip. These changes made the Luger lightweight for its power and the slanting grip put the breech action above and back of the users hand. This gave the pistol excellent balance without any feel of muzzle heaviness.

Compared to the Borchardt, the Luger had been reduced 25% in weight, from forty to thirty ounces, the barrel shortened from seven and one fourth to four and three fourths inches, and the overall length was



1. Borchardt, patented in 1893 by Hugo Borchardt-made by Ludwig & Lowe.
2. Borchardt made by DWM. All Borchardts were chambered for special 7.65 mm cartridge.
3. Model 1902 Carbine - 7.65 mm.
4. Snail drum (32 round) magazine and loading tool for 9 mm WWI Artillery and Carbine Model Lugers.
5. Model 1902 - prototype of the 9 mm Luger. This one has special cartridge counting feature. Very, very rare - less than ten known to exist.
6. 1915 Artillery Model with Persian (Iranian) markings. Extremely rare - only one known in U.S.A.



cut to nine inches from the Borchardt's fourteen. The Luger had a hold-open catch which holds the breech open after the last shot, ready for cleaning or insertion of a fresh magazine. The magazine itself was improved by providing a slide button which could be depressed with the thumb. This lowered the magazine spring, making it very easy to insert the cartridges.

The Borchardt pistol was of very excellent workmanship -- so was the Luger. DWM maintained these high standards for all of the many years they produced the Luger. That is why, even today, you can purchase a DWM Luger "sight unseen" and be confident of acquiring a pistol of high quality.

MANUFACTURERS AND TRADEMARKS

(Trademark found on top of forward toggle link.)

Deutsche Waffen und Munitionsfabriken, trademark -- a scrolled DWM. This, the original Luger manufacturer, has already been covered.. In 1922 DWM was taken over by:

Berlin-Karlsruhe Industrie Werke or B.K.I.W. a holding company who distributed Luger pistols for a number of years after 1922. The trademark was still DWM.

Simson & Co. of Suhl, Germany, trademark - Simson & Co. Suhl. Between 1922 and 1932 this company supplied Lugers to the small peacetime German army or Reichswehr. The pistols were assembled from the tons of surplus parts left over from World War One.

Mauser-Werke, of Oberndorf on the Neckar. B.K.I.W., which controlled the DWM plant, in 1930 became a part of the same holding company that operated the Mauser factory. All of the tooling and machines used to make the Luger was moved from the Berlin plant of DWM to the Mauser plant at Oberndorf. Mauser then became the major producer of the Luger pistol. The trademark "DWM" was used for about four years. Then as Germany began to secretly rearm, all major producers of war material were given secret code names. Mauser used the code name "S/42" on pistols made for the military and the commercial "Mauser Banner" trademark was used on those pistols destined for commercial sales. In 1941 and 1942 Mauser used the code name "byf."

Heinrich Krieghoff Waffenfabrik, Suhl, Germany also produced Lugers as a licensee. Krieghoff imprinted his pistols with an anchor. The stem of the anchor was made up of a downward pointing dagger with an "H" to the left and a "K" to the right. Beneath the anchor were words "Krieghoff" and "Suhl".

The Royal German Arsenal, Erfurt, Germany produced many Lugers for the army during World War One. In place of the DWM trademark is a crown with "Erfurt" below.

The British Arms Manufacturing Company, A Division of Vickers-Armstrong trademark-"Vickers Ltd". This English company produced about 10,000 Lugers for the Netherlands during and after the first World War.

Waffenfabrik Bern of Switzerland, trademark - "Waffenfabrik Bern". On the 1924 Model Luger this trademark appears in two lines where

the DWM would normally appear. A small Swiss Cross surmounts this. The later model, called "o6/29," which had many small differences in design was marked with a Swiss Cross on a matted shield. This mark is on the toggle link where you'd normally see the "DWM".

MODELS

Borchardt Model 1893.

As mentioned earlier this was actually the first successful automatic pistol. The action was unique and copied by most manufacturers since its inception. The action was the short-recoil operated lock mechanism. In this type the breechblock is locked to the barrel at the time of discharge. the breechblock and barrel recoil rearward together for a short distance with the breechblock held firmly to the cartridge base. At this point as the bullet has left the muzzle and gas back pressure lessens, the barrel stops and the mechanism opens upward on a toggle or knee action principle. The bolt, still having some momentum then travels to the rear and compresses a counter recoil spring. The counter recoil spring then moves the bolt forward stripping the top cartridge from the clip. The bolt locks itself to the barrel ready to fire again.

The barrel is 7 1/4", total length 14", weight 2 1/2 lbs. the bore is about .30 calibre, using a special bottlenecked cartridge called the 7.65 Borchardt, charged with smokeless powder and an 84.8 grain bullet. The magazine in the grip holds 8 cartridges. A grip magazine was original with the Borschardt. The magazines are numbered along with the pistol. It had a vertically sliding safety on the left side just above the grip. The grips were wooden. It had open sights, the rear sight located atop the recoil spring housing. A wooden shoulder stock with a removable cheek piece, holster, 3 extra magazines plus a wooden dummy magazine (housing a ramrod and oiler) came with the pistol. The pistol complete with the above attachments etc. sold for \$30.00 in the U. S. The Borchardt was very well made with an excellent finish.

The trouble with the Borschardt was its balance. The grip was at right angles to the line of sight and placed almost midway between the front and rear sights. The bulky counter-recoil spring housing which extended far to the rear was the problem. Being so poorly balanced it was very inaccurate as a pistol. It was much better with the stock attached, however pistol-carbines never have gained much acceptance since they are almost always underpowered as compared to a regular carbine.

PARABELLUM AUTOMATIC PISTOL The First Luger -- Model 1900

Georg Luger redesigned the Borchardt, keeping good features and replacing others with very ingenious ideas of his own. He retained the basic short-recoil toggle joint action but:

1. Inclined the grip at an angle to the receiver.
2. Housed the leaf type counter - recoil spring in the grip thereby eliminating the bulky housing.
3. Shortened the barrel to 4 3/4".

4. Positioned the lanyard ring to the rear top of grip.
5. Redesigned the trigger and trigger cover.
6. Moved the ejector to the right side of the receiver.
7. Eliminated the protruding toggle knob.
8. Eliminated all screws (except two grip screws) in favor of pins.
9. Added a hold-open catch -- the breech stays open after the last shot is fired.
10. Added a slide button to the magazine so by depressing it (and the spring) cartridges can be inserted without effort.
11. Repositioned the safety lever and added a grip safety.
12. Designed a new cartridge for the pistol, the 7.65 MM Luger cartridge. This was a straight (not bottle-necked) powerful cartridge.

These first Lugers were manufactured by DWM to the very highest standards of quality workmanship.

Some people believe Georg Luger should have no credit. that Hugo Borchardt is really responsible for the design of the pistol. The facts do not indicate this - Borchardt tried to perfect his own design and was still trying quite some time after the Luger was being produced. Also, Borchardt's name does not appear on any of Luger's patent papers. He could have protested or taken legal action but did not -- evidently he had no case. Another curious fact -- when the Borchardt pistol was tested by the Swiss in 1898 they called it the Borchardt-Luger. This makes one wonder if Georg Luger didn't actually help Hugo design his pistol!!

Shortly after the Model 1900 was placed on the market it was tested and adopted by the Swiss government. They purchased 3,000 initially, which were marked over the chamber with a Swiss Cross on a sunburst background. The famous scrolled DWM was on the forward toggle.

The U. S. Government purchased 1,000 for field trials. The American Eagle Crest was marked over the chamber and some had a U. S. Ordnance bomb proof mark. They were not well accepted by the military so were disposed of in 1906. It is believed that Bannerman, New York, N. Y. purchased all of them. They were later offered for sale at about \$20.00 each and are a rare, valuable collectors item today.

About 21,000-1900 series Lugers were made. The serial range was from one to 21,000. The Swiss military range was from 2,001 to 5,000 and the balance was divided between German and Swiss Commercial Lugers and the 1,000 purchased for the U. S. Trials.

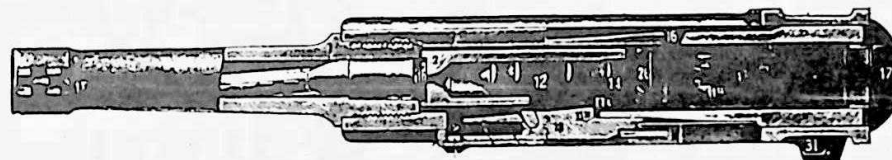
During the ensuing years various models of the Luger were tested and/or adopted by Bulgaria, Sweden, Austria, Canada, Dutch, Switzerland, Persia, U. S., Brazil, Russia, Spain, Norway, Luxemburg, Chile and Portugal. Germany of course (Navy) also adopted the Luger as their standard sidearm.

The "Parabellum" Automatic Pistol

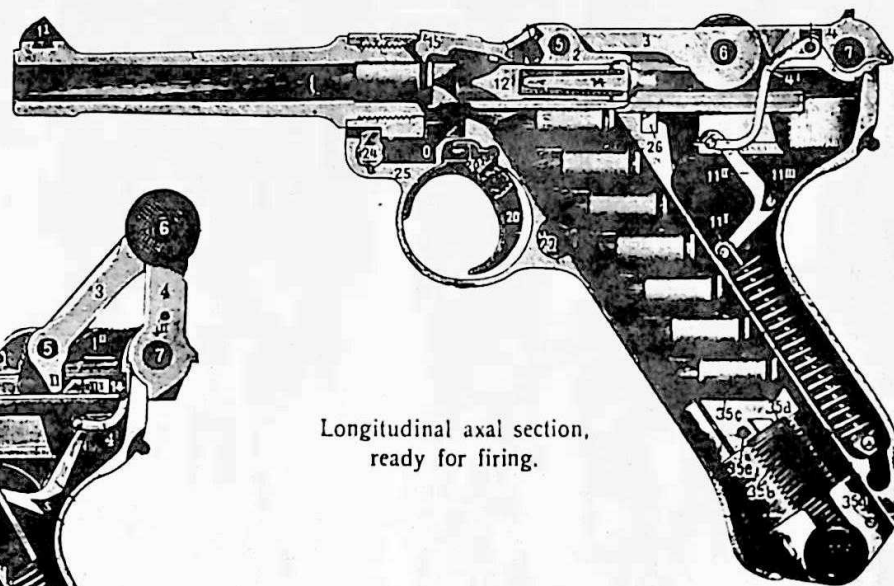
"NEW MODEL" (WITH COIL RECOIL SPRING)



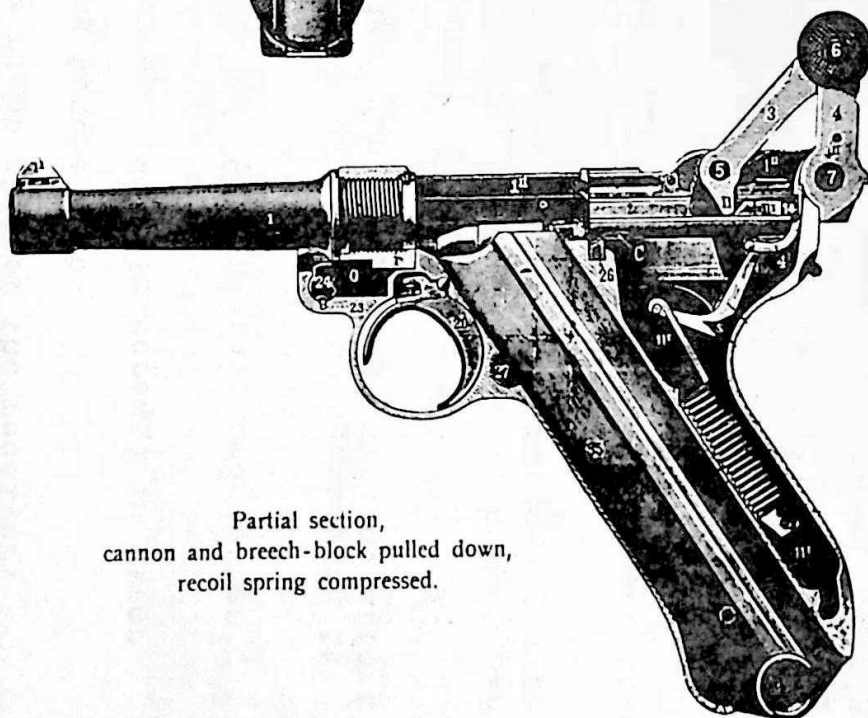
Cross section before the trigger.



Horizontal section.

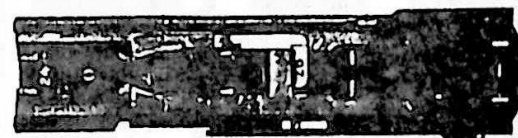


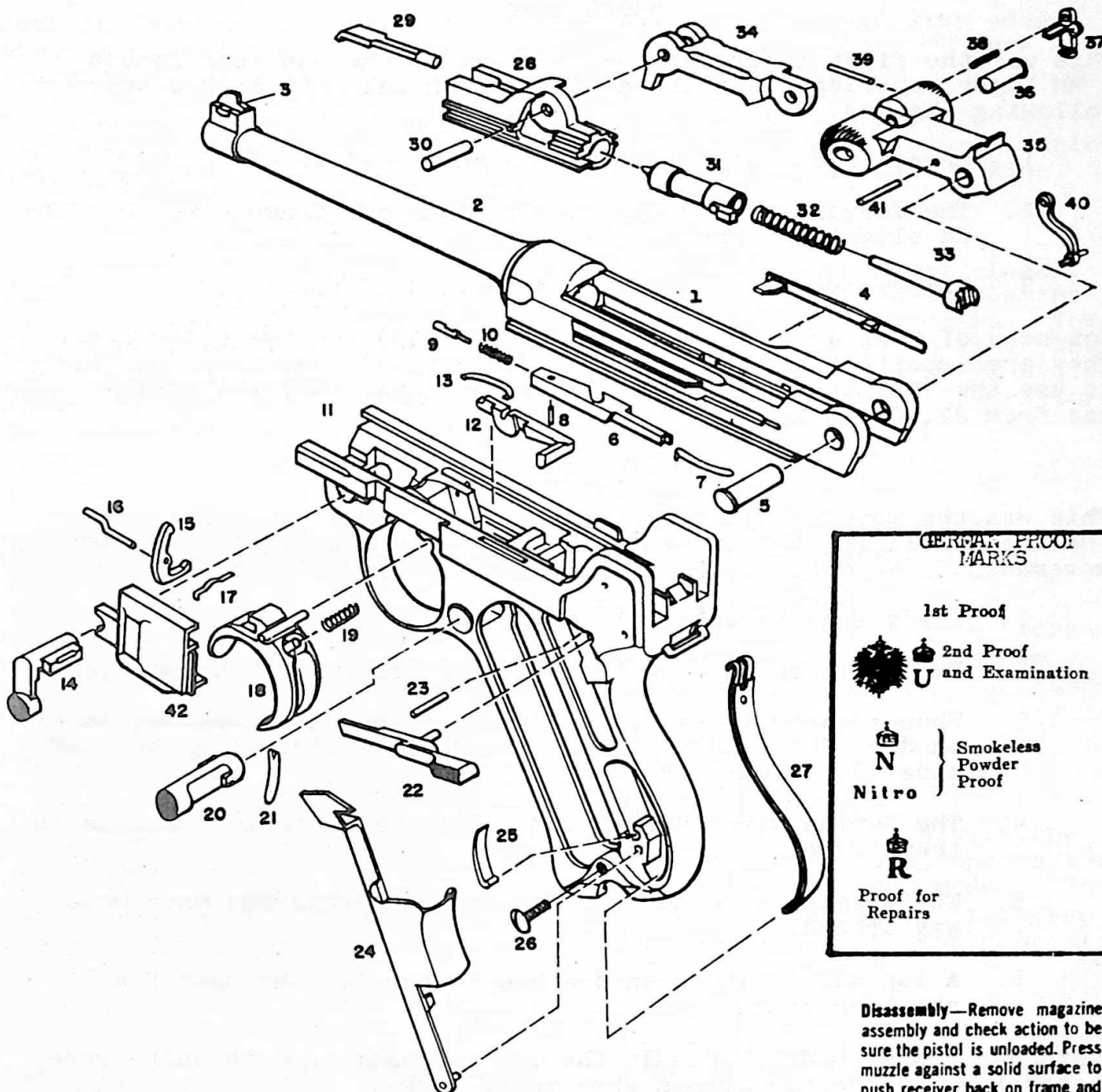
Longitudinal axial section, ready for firing.



Partial section, cannon and breech-block pulled down, recoil spring compressed.

The immoveable stock, seen from above, the moveable parts of the breech-block removed.





GERMAN PROOF MARKS

1st Proof



2nd Proof
U and Examination



Nitro

Smokeless
Powder
Proof



Proof for
Repairs

1900 - 1902 OLD MODEL LUGER PISTOL

Parts List

- | | | |
|-----------------------------|--------------------------------|------------------------------------|
| 1. Receiver | 16. Trigger Lever Pin | 31. Firing Pin |
| 2. Barrel | 17. Locking Bolt Spring | 32. Firing Pin Spring |
| 3. Front Sight | 18. Trigger | 33. Firing Pin Spring Retainer |
| 4. Ejector | 19. Trigger Spring | 34. Forward Toggle Link |
| 5. Connecting Pin | 20. Magazine Catch | 35. Rear Toggle Link |
| 6. Sear Bar | 21. Magazine Catch Spring | 36. Forward & Rear Toggle Link Pin |
| 7. Sear Bar Spring | 22. Safety Lever | 37. Toggle Lock |
| 8. Sear Bar Plunger Pin | 23. Safety Lever Pin | 38. Toggle Lock Spring |
| 9. Sear Bar Plunger | 24. Grip Safety | 39. Toggle Lock Pin |
| 10. Sear Bar Plunger Spring | 25. Grip Safety Spring | 40. Coupling Link |
| 11. Frame | 26. Grip Screws (2) | 41. Coupling Link Pin |
| 12. Holdopen Latch | 27. Recoil Spring | 42. Trigger Plate |
| 13. Holdopen Latch Spring | 28. Breechblock | |
| 14. Locking Bolt | 29. Extractor | |
| 15. Trigger Lever | 30. Breechblock Connecting Pin | |

Disassembly—Remove magazine assembly and check action to be sure the pistol is unloaded. Press muzzle against a solid surface to push receiver back on frame and turn locking bolt (14) down to release trigger plate (42). Trigger (18) with spring (19) may be lifted out of frame (11). Pull receiver assembly (1) forward off frame. Push rear toggle/receiver connecting pin (5). Toggle links (34,35) and breechblock assembly (28) can be drawn out of receiver to rear. Further disassembly is easily accomplished, where necessary, by removing the various pivot or connecting pins (30, 36). Reassemble in reverse order. When replacing receiver with breechblock and toggle links in frame, be sure that end of coupling link (40) engages ears at top of recoil spring (27). Grips and magazine assembly are not shown.

MODEL 1902

This was the first Luger designed for use of the now long famous 9 MM Luger cartridge. As compared to the Model 1900 it had the following changes:

1. Barrel was somewhat "fat" and shortened to 4".
2. The forward portion of the receiver and frame were shortened slightly .. about 5/64".
3. Six groove rifling was used instead of four.

Not many of this model were made (about 1,000) and are quite scarce. They are important as a collectors item because they were the first to use the 9MM Luger cartridge. It is believed that the serial range was from 22,401 to 23,400.

MODEL 1904 (Navy)

This was the model adopted by the Imperial German Navy and called "Marine Modell 1904". It was the first to be adopted by the German government. It differs from the Model 1900 as follows:

1. A six inch barrel, caliber 9 MM
2. Two position adjustable rear sight on rear of toggle link.
3. When a cartridge is in the chamber and the extractor is expanded, the word "Geladen" (Loaded) is visible on the left side of the extractor.
4. The German word "Gesichert" (Safe) was indented beneath the thumb safety lever.
5. The toggles were not cut back but were knurled only part way around.
6. A lug was included on the back strap for the use of a shoulder stock.

This early Navy model had only the DWM trademark and is quite rare. Later Navy Lugers had German Navy proof marks.

THE CARBINE

The 1900 Model Luger was also manufactured in a long-barreled carbine model. The barrel recoiled within a contoured wooden forestock. A detachable shoulder stock came with each carbine. The complete gun was offered in a nice case which had compartments for tools and cartridges. Please note that the shoulder stock or carbine models produced during World War I were entirely different from this special high quality carbine which was introduced in 1904.

This carbine had a standard barrel 11 3/4" long which was considerably thicker than the pistol barrel. It had a long "ramp" front sight and the adjustable (100-300 meters) rear sight was placed on the barrel

just in front of the chamber. A special 7.65 cartridge with added power was used. A few may have been made for use with 9 MM cartridges.

It is reported that the serial range was from 23,401 to 25,000 so it can be assumed that about 1600 were made. These were produced during peacetime and were reported to be used in hunting as "Brush" guns.

NEW vs OLD MODEL

Up to this point we have discussed the so called "Old Model" Luger. The first (1900) model and all made prior to 1906 had a flat laminated counter-recoil spring, flat extractor and cut-back toggles. These three principal features are characteristic of the "Old Model". The only exception is the 1904 model (Navy) which was really a transition piece. It had the "Old Model" flat spring but a 1906 type extractor. The toggles differed from either model.

1906 MODELS

A new coil recoil spring, a definite improvement, was designed. The flat extractor was replaced by a design which also served as a "Loaded" indicator. When a cartridge is fed into the chamber, the extractor grasps the shell and raises thereby exposing the word "Geladen", German for "Loaded", on the left side. The toggles were not cut back and were knurled all the way around. This made them easier to grasp and hold when manually chambering the first cartridge. All 1906 models were made by DWM.

MODEL DESIGNATIONS - 1900-06, 1902-06 ETC.

In the year 1906 a number of models were introduced, all having the "New Model" features described above. But some were redesigned after the 1900 model and some were updated versions of the 1902 model. The 1904 model was also redesigned in 1906. To differentiate, it became the practice to use the basic model in conjunction with 1906 hence 1900-06, 1902-06 etc.

THE 1900-06

Same graceful, slim 4 3/4" barrel, 7.65 MM, as the 1900, grip safety and DWM trademark on toggle. German commercial pistols were made in this model - no marking over chamber. The Swiss purchased over 10,000 - serial range 5001-15,300 plus. Swiss Cross on a matted sunburst over chamber. A number were also marked with a matted shield instead of sunburst, supposedly for the police instead of military personnel.

The American Eagle was produced in this model. The only difference was the American Eagle Crest over the chamber and "loaded" on the extractor. They should be found in the 25,000 to 37,000 series according to report.

The Portuguese 1900-06 had the Royal Portuguese Coat of Arms over the chamber - a crown with "M" and "2" (King Manuel II) below, Portuguese proof marks on the pistol are a triangle inside of a circle. The extractor reads "Carregada" instead of "Geladen".

1902--06

The 1902 model was updated with 1906 features as was the 1900-06. Four inch barrel, 9 MM. The serial range, with some breaks, runs from about 3700 to upwards of 70,000. German Commercial and American Eagle models were produced.

THE DUTCH LUGER

The government of the Netherlands, at various times during the period of about 1908 to 1928 purchased small quantities of a special 1902-06 type Luger. DWM produced them; they had a special block of serial numbers (1 to 13,000) which were continued in sequence from one order to another. They all had 4 inch barrels, 9 MM, grip safety, no stock lug. DWM mark was in usual place and the date was on top of barrel at the rear. The word "Geladen" which means "Loaded" in German and Dutch was on both sides of the extractor. In the safety area is an arrow pointing upwards and the word "Rust" ("safe" in Dutch) is imprinted above the lever. The Dutch proof mark was a crown over a "W" on the receiver-front, left side. The "W" stood for Wilhelmina, the Queen. A small brass plate was welded on the left side, behind the trigger plate on which was inscribed the Dutch military unit markings.

RUSSIAN

Another lot produced by DWM was for Russia in 1908. It was identical to the 1902-06 model. Like the Dutch model above, it had the extractor (left side only) and the safety area marked with the countries own wording - in Cyrillic. Crossed rifles appear over the chamber. This is a very scarce item.

1906 NAVY

This had the new features, coil counter-recoil spring, new knurled toggles and "pop-up" extractor. Six inch barrel with adjustable rear sight; stock lug on back strap. The proof mark was a crown with "m" (Marinen - German for Navy) below. A commercial model was also made: identical to the Navy except with commercial type serials and a crown over "n" proof. The commercials were produced in 7.65 or 9 MM, the Navals in 9 MM only.

1906 U. S. ARMY EXPERIMENTAL

This was a "new model" except larger overall to accomodate the cal.. 45 ACP cartridge. It had a heavier counter recoil spring and other minor design changes necessitated by the heavier caliber. Only two were made, according to reports, serials Nos. 1 and 2. No. 1 was "destroyed" during U. S. tests in 1907. No. 2 is in the possession of a collector.

The Luger design has, technically, one fault. The counter recoil spring gives a "push" to the bolt but does not seat the cartridge in the chamber. Momentum and the toggle action perform this operation. This is why the Luger failed to pass the U. S. tests as compared to the other contenders. The dust, sand and rust tests fouled the action sufficiently to cause excessive jamming and/or failure to seat the cartridge.

PISTOLE PARABELLUM, MODEL 1908
PISTOLE MODEL 908 or P.08

This was the year that the German army officially adopted the Luger. It was very similar to the 1902-06 model. The grip safety was eliminated and consequently operation of the thumb safety was reversed - push forward to fire. A four inch, six groove barrel, 9 MM, was used. "Gesichert" was imprinted beneath the safety and "Geladen" on the extractor. In addition to DWM we now see the advent of another manufacturer - the Royal Arsenal at Erfurt, Germany. The Erfurt name under a crown was imprinted on the front toggle joint. The year of manufacture was over the chamber of both DWM and Erfurt Lugers. P.08 will be found imprinted on some pistols. At the beginning the hold-open device was eliminated then reinstated in about 1914. Hold-opens were later added to some. Some were built without stock lugs. DWM and Erfurt Lugers were identical except for trade and proof marks. The DWM also had a better finish.

Some commercial model 1908s were made but not many because of the heavy demand of the German Army. They were identical except for serial numbers, proof marks and no date over the chamber.

The model 1908 was manufactured in fairly large quantities between 1908 and 1914 when World War I began - then the production was greatly accelerated. It has been reported that almost two million P.08 4 inch barreled, 9 MM Lugers were built between 1914 and 1918 when the war ended. The quality and finish of the Lugers produced prior to 1914 was excellent --- those made during the war were much inferior in appearance and workmanship.

In 1914 the model 1908 design of the German Army 4" barreled Luger was "frozen" and almost no variations were produced. All had 4 inch, 9 MM, barrels, stock lugs, hold-opens and the year of production over the chamber. They had four digit/letter serial numbers.

ARTILLERY MODEL

A change was made however to provide a suitable arm for the artillery and certain other units who could not function efficiently while carrying a heavy rifle. The regular P.08 was modified by adding an 8 inch barrel. The rear sight was moved to the rear of the barrel -- it was adjustable from 100 to 800 meters. It came complete with a special holster and shoulder stock. A very unusual feature was the 32 round capacity drum (snail) magazine. This when used with the pistol and shoulder stock, provided the user with a rapid fire 32 shot carbine which, though it appeared somewhat cumbersome, was actually quite well balanced and accurate.

LUGER MACHINE PISTOL AND OTHER CHANGES

During WWI several attempts were made to convert the Luger to full automatic. One was equipped with a sliding bar arrangement, another called for a "switch" or lever mounted on the trigger plate. Both were intended to trip the sear and give full automatic action. Another called for a new sear which accomplished the same purpose. None were truly successful. It is possible however for some of these experimental pieces to still be in existence.

Some P.08 Lugers were fitted with a magazine safety. When the magazine was removed the pistol could not be fired. A sear safety was also developed. With a cartridge in the chamber, the gun could absolutely not be fired without raising this safety. If you find a Luger with either of these you will quite likely find both since they were used together in most instances.

1908 BULGARIAN

A variation of the 1908 was the Bulgarian. It was the same as the P.08 except that the Bulgarian Coat of Arms, a standing lion within a crowned shield is on the forward toggle link. The DWM mark is over the chamber - very unusual. No stock lug in its location is a lanyard loop. Cyrillic characters spelling the Bulgarian equivalent of "fire" are on the lower area under the safety lever. The extractor is also marked in Cyrillic. The 1908 Bulgarian is extremely rare.

It has also been reported that 1908 models were produced for Romania, Turkey, Ethiopia, Finland and Persia with appropriate crests or coats of arms, "safe" and "loaded" markings. These, however, were undoubtedly produced before 1914.

THE NAVAL MODEL - 1904 to 1914

As you will recall the naval model of 1904 was a transition from the "old" to the "new" model which became standard in 1906. It had a 6 inch 9MM. barrel, "new model" featured extractor and non-cutback toggles, "Gesichert" safety, and stock lug on grip tang. Then in 1906 the new type recoil spring was added. The grip safety was retained. The 1906 models had naval proof marks for the first time. In 1908 or shortly after, the grip safety was eliminated. In 1914 the naval model bore the date over the chamber as did the P.08. To our knowledge, all were made by DWM.

MODELS AFTER THE WAR

The victorious allied powers imposed all sorts of restrictions on Germany at the treaty of Versailles. The theory was of course to keep the militant German people from ever again having the power to wage war. Of course we all know how successful they were!!

1923

One of the rules was that no pistol could be produced larger than 8 MM or a barrel of more than 3 15/16 inches. The Germans ignored the restriction however and continued to manufacture and/or assemble 9 MM Lugers. They did obey the ruling when producing pistols for export - -- this was the so called 1923 model. It had a 3 5/8 inch barrel, 7.65 or .30 caliber. In other respects it was identical to the P.08 German army model produced all during the war.

TWO DATE MODELS

The germans were allowed to maintain a small army for internal

security purposes. World War I P.08s were reissued and/or assembled from parts. The wartime date over the chamber remained and a new date such as 1920 was imprinted above it.

1920

In about 1920 the Germans assembled many Lugers for their own and commercial use. They were identical to the wartime P.08 except for the date and in some cases, caliber. They were more painstaking however and the quality of these pistols was better than that of the wartime production. The 6 inch naval model was produced in the same manner - no change except for the date.

Since it is simple to convert a 9 MM Luger to 7.65, quite a number of commercial 1920 models were assembled and sold. You will find 9 MM with 4 or 8 inch barrels and also 7.65 cal. with 6 inch barrels. DWM or Erfurt will appear on most but no date. Some will show signs of having the date ground off. Most will have only commercial proof marks.

SIMSON & CO.

The German Government contracted with Simson & Co. of Suhl, Germany to assemble Lugers for the army. The enormous amount of spare parts left over from WWI were used. The finished product had "Simson & Co. Suhl" on the toggle link in place of DWM - in other respects it was a P.08 military model. Some were dated over the chamber, many had the date ground off.

A special carbine also came on the market. It was the standard 1908 (P.08) model but had a longer barrel and was offered with a shoulder stock. Several American companies offered them. For example, Stoeger in their catalog edition No. 1, dated 1925, listed these. They offered the 9 or 7.65 MM. in 6, 8, 10 or 12 1/4 inch barrels. The stock was \$2.25 and a holster for the stock also at \$2.25. The pistols ranged in price from \$32.50 to \$48.00 depending upon the caliber and barrel length.

STOEGER LUGERS

Several years after World War I, Mr. A. F. Stoeger, founder of A. F. Stoeger Inc. - later to be known as Stoeger Arms Corporation (Publishers of Shooters Bible) became the U. S. Distributor for the Luger pistol. During the early twenties he imported the best quality post-war pistols that he could find in Germany. Then in 1923 or 1924 he registered the name "Luger". Strangely enough no one had ever thought of doing this previously, since in Europe the pistol was known by other names, particularly "Pistole Parabellum".

After registering the name he placed special orders with DWM. These were marked as follows:

1. On the right side of the receiver "A. F. Stoeger Inc., New York," in two lines. Also the word "Germany".
2. On the frame rail, right side, "Genuine Luger - registered U. S. Patent Office".

3. Over the chamber was the American Eagle.

Three models were offered - (1) 9MM, 4 inch barrel, same as the 1908 (P.08) model. (2) 9 MM, 8 inch, same as the 4 inch in other respects. (3) 4 1/2 inch, 7.65 MM "Safe" and "Loaded" in English, appeared on most of these although some variations have been reported.

In the Stoeger catalog edition No. 31, 1939, the three above models were illustrated, described and priced at \$100.00 for the 7.65, \$100.00 for the 4 inch 9MM and \$115.00 for the 8 inch 9MM. They were advertised as being built by DWM (then moved to the Mauser plant) to absolute pre-war standards.

Stoeger also offered a .22 cal. conversion unit. It was priced at \$32.00 in the above mentioned catalog. "Snail" 32 round magazines were priced at \$9.75 (9MM only).

VICKERS - DUTCH

During the first war the Dutch placed an order with Vickers Armstrong Ltd., England for 10,000 Lugers. Previously they had purchased them from DWM - the English purchase must have been a political decision. They were in most respects similar to the DWM produced Lugers, 9MM, 4 inch barrel, grip safety, no stock lug. No mark over chamber, "Vickers, Ltd." on front toggle, "Rust" and upward pointing arrow on safety area. "Geladen" on both sides of extractor. British proofs (V incrown) and a scrolled "W" under a crown (Dutch proof) appeared on most pistols. A small brass plate was on the left side for Dutch military unit markings. Commercial numbering was used.

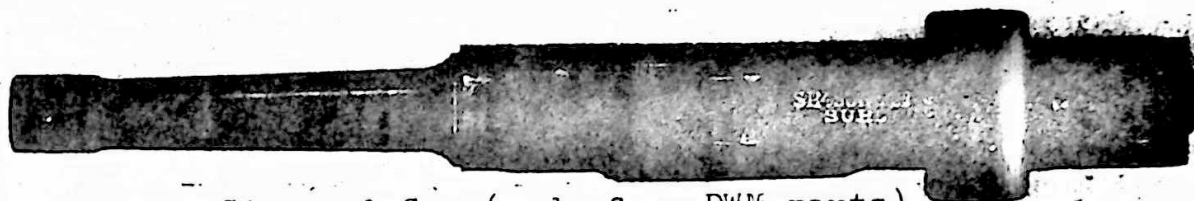
Japanese markings have been found on Vickers Lugers. Evidently these were captured in the Dutch East Indies during WW II and remarked by the Japanese.

1924 SWISS

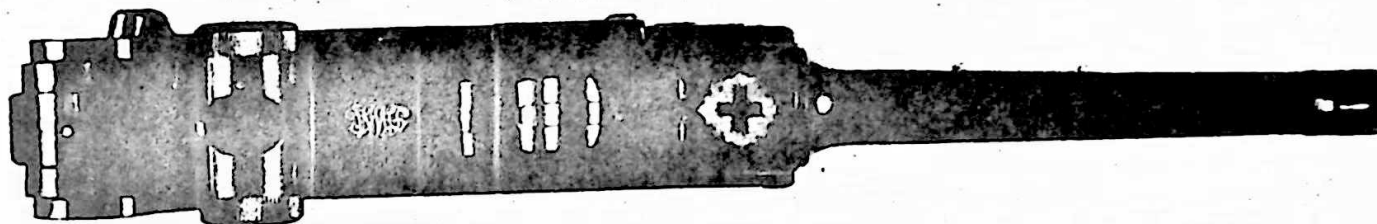
Switzerland as you will recall purchased over 13,000 Lugers from DWM. in 1924 they needed more but, evidently they were unsure of the quality and/or ability of Germany's production so they decided to make their own. This model 1924 was the same as the model 1900-06. It was made by Waffenfabrik, Bern, the extractor was imprinted "Geladen": nothing in the safety area. On the frame (left side) and on the forward toggle is "Waffenfabrik Bern." Above this is the Swiss Cross - nothing above the chamber. The grips are not checkered all the way to the edge. The finish is dull blue. The proof mark is an "M" below a Swiss Cross on the receiver, left front. About 18,000 were made (commercial serials) from 15,000 through 33,000, approximately.

1929 SWISS

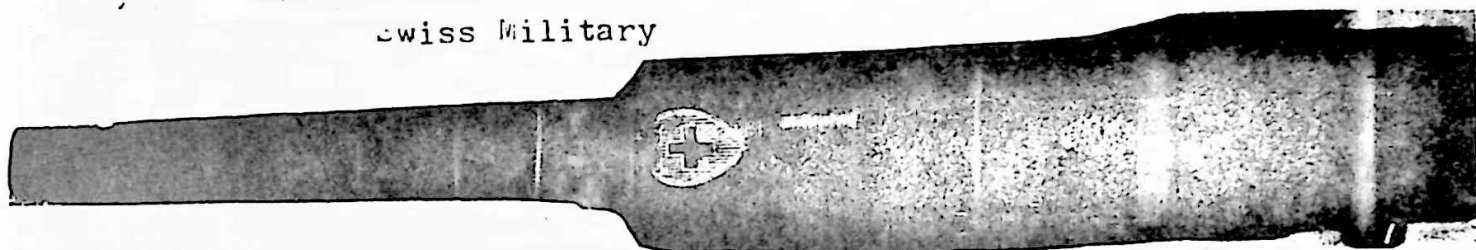
In 1929 and until 1948 the Swiss manufactured a pistol that was somewhat different than any Luger ever made. The forward edge of the grip and frame is straight, black plastic grips. The trigger plate has a raised portion running from top to bottom. there is a step in the receiver over the chamber. An "S" appears in the upper safety area. Toggles are not knurled. The grip safety is much longer than previous



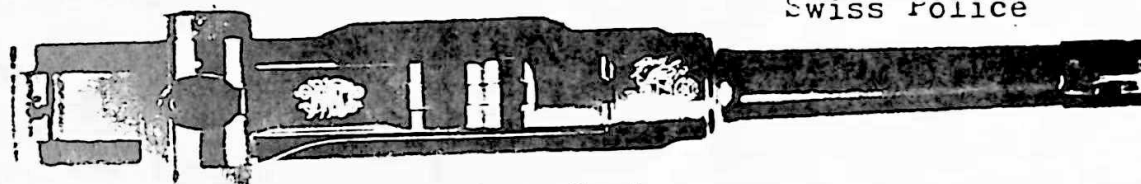
Simson & Co. (made from DWM parts)



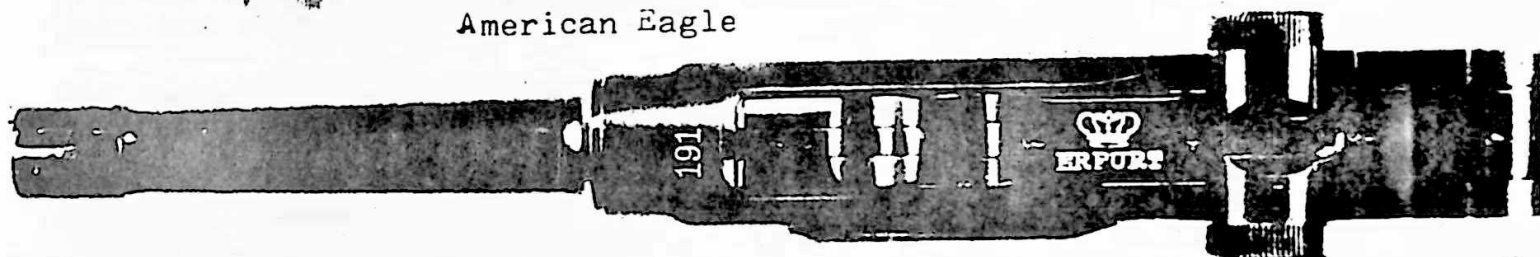
Swiss Military



Swiss Police



American Eagle



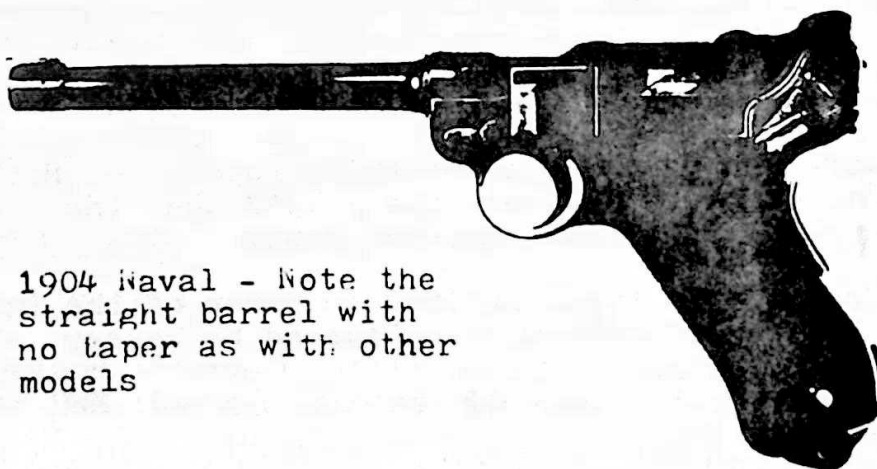
Erfurt



DWM World War 1 Military



Bulgarian (Royal Crest over chamber)



1904 Naval - Note the straight barrel with no taper as with other models

models. On forward toggle is the Swiss Cross on a Shield. About 30,000 were made, serial 50,001 and up, about 28,000 for the military - the balance for commercial sale. The commercials have a "P" before the serial number and are extremely scarce.

NAZI ERA - MODEL 1934

In 1930, a short time before Adolph Hitler attained power in Germany, DWM and its holding company B.K.I.W. merged with Mauser. Mauser used the DWM trademark until about 1935. At this point Hitler began to secretly arm his henchmen so code names and dates were used to camouflage production. Instead of DWM the code name "S/42" was used on all military Lugers - the Mauser Banner on commercial pieces. Over the chamber was a "K" meaning 1934 (scarce today) and "C" for 1935. The actual dates were used from 1936 on. All Lugers were modeled after the P.08 but were in 9 MM and some 7.65 MM. - 4 inch barrel. In 1936 Mauser used an additional code name "42". In 1941 and 1942 Mauser used an additional 3 letter code, "byf".

In 1933, while DWM machinery was being moved to Mauser, it is believed that Mauser assembled a number of Lugers from left-over DWM parts of varying degrees of quality and/or completeness. These Lugers are commonly called "Reworks" by collectors. They have no Mauser identification; the reason is not clear. Generally, the Mauser workmen assembled them from parts with the same serial number (last two digits) but examples of mixed commercial and military style numbering. The front sight band on Reworks is characteristically "sharp" and not sloped into the barrel as were DWM and later Mauser Lugers.

MAUSER - DUTCH

Several thousand Luger pistols were made by Mauser in 1940 for the Dutch. They were similar to the regular 1934 model except "Geladen" on both sides of extractor, "Rust" in safety area with arrow pointing down. The trademark was "Mauser" and the date 1940 over chamber.

Another manufacturer made Lugers during Hitler's rise to power - Heinrich Krieghoff Waffenfabrik of Suhl. Actually, at this time he was an assembler, using parts left over from WWI. On the forward toggle was the Krieghoff trademark, an anchor with "H" and "K" to the left and right respectively. Below were two lines "Krieghoff" and "Suhl". Suhl only on some. A date code for 1935, "S" was used over the chamber. "Heinrich Krieghoff Waffenfabrik, Suhl" was imprinted on the frame, left side, of some. A few commercials were made - no date and a "P" before the serial. All military Krieghoffs had the actual year date on chamber in 1936 with the last ones assembled in 1937 - for a reported total of about 9,000.

In 1939 Kreighoff manufactured about 4,000 Lugers for Hitler's army but did not complete delivery until 1942 when the Luger was replaced by the P38. They had plastic grips.

Nazi Germany dropped the Luger in 1942 in favor of the P38. Portugal wanted to buy Lugers so 4,000 were delivered by Mauser. This model

according to an official report was called "Pistole Parabellum 9 MM M943." It is believed that they were marked with the Mauser Banner and dated either 1942 or 1943.

So, this was the end of the fabulous Luger pistol. It had its beginning in Connecticut, U.S.A., enjoyed a fabulous popularity for more than three generations and the greatest production of any pistol, ever.

SERIAL NUMBERS

Lugers were serially numbered in two ways:

Commercial - numbered from one on up to five digits. Before World War I DWM serial numbers ranged up to nearly 80,000. The complete number will be found on the frame just above the front of the trigger guard and underside of the barrel. The last two digits will be found on the toggle just below the rear sight, on the trigger cover plate (bottom) and on various inside surfaces, including the grips.

Military - to facilitate the numbering of the many pistols produced during the war years a "four digit maximum plus letter" system was used. When a series reached 9999A for example, they started over again with 1B and up, and so on through the alphabet. The serial and letter will be found on the frame and barrel as with commercial numbers and on the heel of the magazine. Also, the serial number but no letter will be on the left front side of the frame. The last two digits will be found in plain sight on center of trigger plate, bolt and rear of toggle link.

The number/letter combination still didn't give enough latitude to avoid repetition so, to identify your military Luger properly and safely it is advisable to use the number, letter, year, barrel length and trademark.

TRANSLATION OF TERMS

CARREGADA - Loaded (Portuguese)

DEUTSCHE - Germany (German)

GELADEN - Loaded or charged (German) also means "tipsy"!

GESICHERT - Secure or safe (from the German root word Sicher).

(Note - The German and Dutch language is closely related.)

MARINEN - Navy (German)

METALLPATRONENFABRIK - Metal (metall) cartridge (patronen) factory (fabrik) - German

PISTOLE PARABELLUM - Pistol for war - German (Latin derivation)

RUST - Safe (Dutch)

WAFEN - Weapon (German) - thus Deutsche Waffe und Munitionsfabriken or DWM (German weapons and ammunition factory).

LUGER

Incidentally, the Luger is almost unknown in Germany or other European countries under the name "Luger". In these countries it is known as "Pistole Parabellum", principally in some cases as "P.08" and "Pistole 1900" but almost never as "Luger". The name "Luger" was used in the U.S. by DWM's sales representative and later copywrited by A. F. Stoeger Inc. - it "caught on" and is used exclusively in the U.S., even today. One other point - the word Lueger, as used by some is spelled incorrectly--no "e" before the

AMMUNITION AND BALLISTICS

The only trouble ever experienced in firing the Luger is jamming - - either failure to open entirely or close entirely. Nearly every jam can be traced to variable quality of ammunition. The important thing is to get good strong reliable ammunition. A Luger in good mechanical condition will not be harmed by a moderate overload but will almost certainly malfunction with a light load.

Although the trigger pull leaves something to be desired, the accuracy of the Luger is excellent providing you get good ammunition and gun. Usually the 4" barrel model will shoot a little high and to the left. The longer barreled models are on target. It also has a flat trajectory as seen in the following table compared to the 45 ACP. This table gives the amount the bullet would drop if the gun were fired with the barrel horizontal:

| <u>NAME</u> | <u>BULLET WEIGHT</u> | <u>DROP OF BULLET IN INCHES AT</u> | | | | | |
|-------------|----------------------|------------------------------------|---------------|----------------|----------------|----------------|----------------|
| | | <u>25 yds</u> | <u>50 yds</u> | <u>100 yds</u> | <u>150 yds</u> | <u>200 yds</u> | <u>250 yds</u> |
| 9MM Luger | 121 Gr. | 1.0 | 4.2 | 18 | 43 | 78 | 128 |
| .45 ACP | 230 Gr. | 1.5 | 6.8 | 28 | 68 | 122 | 203 |

ORIGINAL DWM AMMUNITION

| | <u>1893 BORCHARDT</u> | <u>1900 LUGER</u> | <u>1903 LUGER CARBINE</u> | <u>1902 LUGER</u> |
|------------------|-----------------------|-------------------|---------------------------|-------------------|
| Caliber (MM) | 7.65 | 7.65 | 7.65 | 9 |
| Caliber (Inches) | .300 | .301 | .301 | .354 |
| Bullet Weight | 84.8 grains | 92.6 grains | 93 grains | 124 grains |
| Velocity (FPS) | 1312 | 1150 | 1500 | 1250 |

NOTE: The Luger carbine cartridge because of low demand is not made in the U.S.A. It is a more powerful cartridge to operate the heavier recoil spring of the long barreled carbine. The carbine cartridge is colored black.

The 9MM cartridge now being manufactured in the U.S.A. by Remington has an improved high velocity of 1210 FS as compared to the standard 1050 FS previously available in the U.S. This cartridge has a bullet in the shape of a truncated cone - flat point.

RELOADS

For those who reload, the following is recommended:

| | |
|------------|--|
| Bullet | Ideal 356402 |
| Bullet wt. | 123 grains |
| Powder | 6 gr. Pistol No. 5 or 4.8 gr. Bullseye |
| Velocity | 1135 FPS or 1120 FPS |

NOTE: When buying foreign ammo. ask for 9MM parabellum.

PROOF MARKS

The proofing of firearms has been compulsory in England and Belgium since 1672. The English standards were the highest. In 1892 Germany adopted the English standards and refused to accept the Belgian proof. So Belgium raised its standards to the same level. English, German and Belgian proof marks now command the highest recognition.

Crown over "N" -- The "N" stands for nitro or smokeless powder. This was the basic German proof. You will find this on most DWM commercial Lugers, on the left front of the receiver.

Crown over "R" - indicates a repair or alteration, usually found near where the repair was made.

Crown over "B" -- Crown over "U" -- Crown over "G" - The "B" and "U" proofs were for the barrel and action as a unit and the "G" was for barrels only.

Crown over "M" - Navy proof - L H side of receiver and bottom of barrel.

Crown over "W" -- Dutch proof - the "W" stands for Queen Wilhelmina.

Crown over "V" - English (Vickers) proof on Dutch Lugers.

Crown over "GP" - The "G" and "P" are superimposed on one another - also a Vickers Dutch (English) proof.

Triangle within circle - Portuguese proof.

Cross .. This small cross is found on Swiss Lugers. At times it will be found alone or atop a larger "V" or in a box over an "M".

A reversed "B" flush with a "P" - this Swiss proof is found on Swiss 1929 Lugers.

Nazi Eagle over "N" - Smokeless powder proof of Nazi era.

Nazi Eagle over Swastika - Found on Mauser military Lugers.

WORLD WAR I

Prior to and during World War I the P.08 military Lugers made by DWM and Erfurt were marked differently by each manufacturer. Each used three or four different proofs - usually an eagle (could be a rough version of the Imperial Eagle shown on our cover) plus two or three other characters that we cannot define on right front side of receiver. These of course are military proofs and the eagle is believed to be the final proof.

WORLD WAR II

Here again during the war Mauser and other manufacturers used their own version of an eagle - this time the Nazi Eagle - side by side with two or three other characters with numbers below.

CURRENT LUGER VALUES

| <u>YEAR - MODEL</u> | <u>\$ VALUE</u> | <u>YEAR - MODEL</u> | <u>\$ VALUE</u> | <u>YEAR - MODEL</u> | <u>\$VALUE</u> |
|---------------------|-----------------|---------------------|-----------------|---------------------|----------------|
| L. & L. Borchardt | 1270-2750 | Portugese M2 | 250-350 | Carbine | 1800-2700 |
| D. W. M. " | 1000-2500 | Naval | 525-825 | Swiss Rework | 325-650 |
| | | Brazilian | 275-400 | Vickers Dutch | 575-1075 |
| 1900 Models | | Comm'l 7.65mm | 350-575 | Vickers Dutch | 950-1000 |
| Swiss | 310-575 | Comm'l 9mm | 400-700 | Abcr' & Fitch | 1075-1500 |
| American Eagle | 310-575 | Dutch | 400-650 | Stoeger-var.mod. | 525-2700 |
| Commercial | 360-650 | | | Simson | 400-1075 |
| | | 1908 Models | | 1923 Commercial | 200-425 |
| 1902 Models | | German Army | 250-450 | 1925 Safe & Ld'd | 325-525 |
| American Eagle | 1090-1800 | Bulgarian | 474-1150 | DWM Dutch A. F. | 375-625 |
| Commercial | 1490-2000 | Commercial | 275-475 | Portugese GNR | 350-475 |
| Carbine | 1375-2350 | Naval | 525-700 | 2/42 K date | 474-900 |
| Cartridge Cn'tr. | *** | | | 2/42 G date | 250-375 |
| | | 1914 Models | | 2/42 Dated | 225-900 |
| 1904 Model | | German Army | 200-400 | Mausers Bn'r Com. | 350-950 |
| Navy (rare) | 4500-5000 | Naval | 300-575 | Mausers Bn'r Mil. | 300-550 |
| | | Artillery | 300-575 | (dated) | |
| 1906 Models | | Double Date | 275-400 | Persian Contract | *** |
| Swiss Army | 350-525 | | | 42 Code | 250-325 |
| Swiss Police | 375-575 | 1920 Models | | byf dated | 250-325 |
| American Eagle 7.65 | 375-550 | Commercial | 175-300 | Krieghoff Models | 500-1100 |
| American Eagle 9mm | 400-625 | Military | 225-325 | | |

** These Models are so rare that there is no price available.

Note: If the clip is original, with matching serials, add \$75 to 150.
 Above prices cover Lugers with all matching serials - if unmatched, deduct 25% to 40%.
 Above price range covers Lugers in fair, up to excellent condition.
 If reblued, use lower range.

HOLSTERS and ATTACHMENTS

An original holster complete with an extra magazine (clip), providing it has a mag. compartment, and tools (take-down tool, pin punch and cleaning rod) is a very desirable addition to any fine Luger. Latest prices are listed below - we are quoting for holsters in very good to excellent condition only. As Follows:

| | | | | | |
|------------------|-------|-----------------------|------|-------------------|------|
| 1906 Naval ----- | \$100 | 1914 Naval ----- | \$85 | 1914 Artillery - | \$75 |
| 1908-1917 P08 -- | 35 | 1900-1906 Swiss | 35 | 1909 M2 Port. - | 35 |
| 1933-1945 Nazi - | 30 | 1920 Carbine -- | 125 | 1902-1920 Carb.- | 250 |
| 1920-1940 Comm'l | 30 | Abcr' & Fitch-175-350 | | Telescoping stock | |
| Drum Carrier --- | 300 | | | holster --- | 200 |

Attachments

Snail Drum magazine (32 round) --\$750
 Drum loading tool ----- 175

Stocks

11902 Carbine -----\$350
 11920 Carbine ----- 400
 11904-1014 Naval -----500
 Telescoping stock with Holster -- 450
 11914 Artillery ----- 150

Note: All of the above prices are current as of September, 1976. Add approximately one percent per month after this date, or 10% per year to allow for inflation.

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