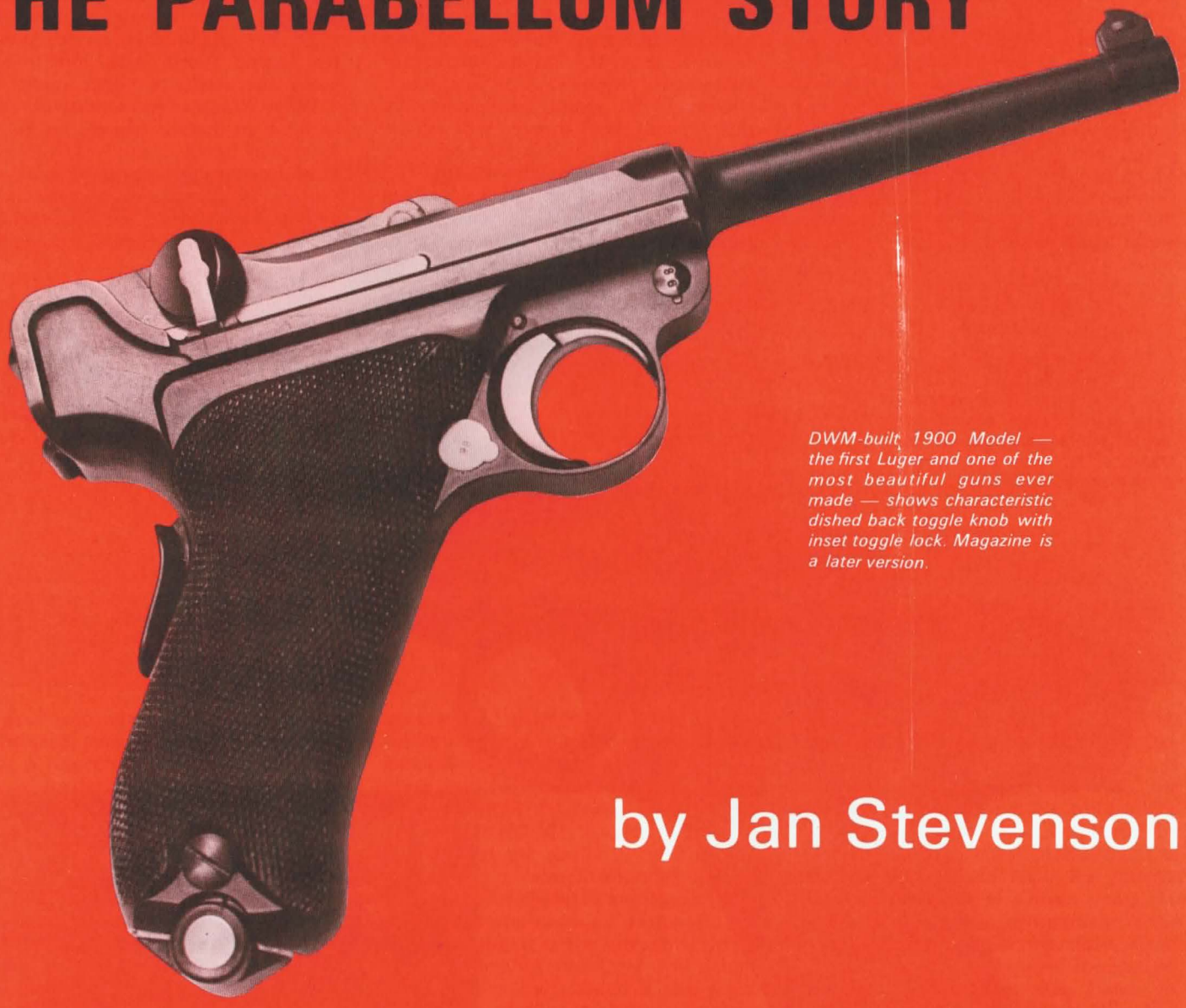
PART ONE:

THE PARABELLUM STORY



DWM-built 1900 Model — the first Luger and one of the most beautiful guns ever made — shows characteristic dished back toggle knob with inset toggle lock. Magazine is a later version.

by Jan Stevenson

EDITORIAL NOTE

In this series, you will get the full details of Mauser's reentry into the sometimes-strange world of the Luger pistol. That the pistol is now called Parabellum and not Luger is just one of the weird angles.

Jan Stevenson, who put this full treatment—and the chapters which follow—together in two grueling months of travel in Switzerland and in Germany, is not new to Gunfacts' readers. His reports from Europe have been complete and early without exception. However, this series on the Parabellum is something special.

This sort of thing isn't done, you know. This sort of information is supposed to be dug out years later after the dust is settled. In a way, this series will make all Gunfacts' readers instant experts on the post-1945 Luger. There are details herein that will surprise other writers who have written on the Luger, serious collectors, and, indeed, each of the sources quoted—the men of Mauser, SIG, Hammerli, Interarms will beyond a doubt find things they didn't know here in black and white for the first time.

As for why Gunfacts is bringing this to you: Well, who else would? Who else would provide the space, or commission such a complete story, or have, right on its own staff, the resources and the knowledge to check every checkable statement, survey every photograph?

This is definitely a Gunfacts kind of story, and we're proud to bring it to you.

K.W.

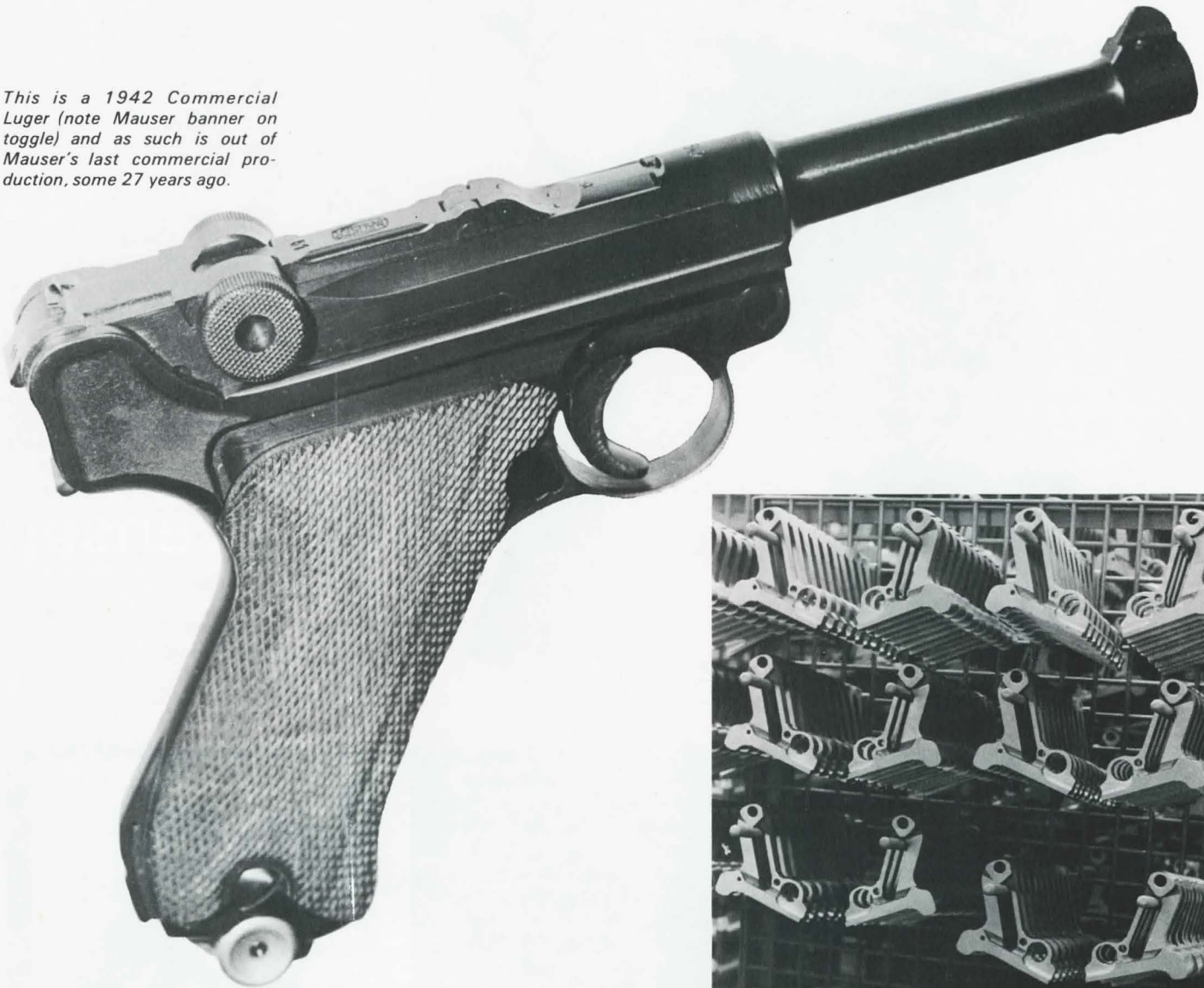
Jan Stevenson

Perhaps no handgun in history has been more widely used, more universally recognized, and so idolized as the Pistole Parabellum, or "Luger" as it's popularly known in the U.S. When production ceased at Oberndorf in December of 1942, some two and a half million German-built Lugers had been manufactured from the pistol's introduction in 1900. They had seen military and police service by a score of governments in all corners of the globe. More than two million were used by German forces from 1914 to 1918 in the muddiest, bloodiest battles the world has ever seen.

With a background like this, the Parabellum, it would seem, must have been decades ahead of its time. In actual fact, the gun made it on little more than looks. As many awards for industrial design indicate, the Luger is a beautiful gun. Rakish, sleek, and deadly looking, the Parabellum reeks of aristocratic elegance. The first touch reinforces the visual impression. An experienced pistol shooter will realize that the balance is too far back, the trigger pull is chronically horrid, and the gun is slow to get into action. But the amateur knows only that it feels great in the hand, and that despite his untutored awkwardness, it seems to point perfectly for instinctive shooting.

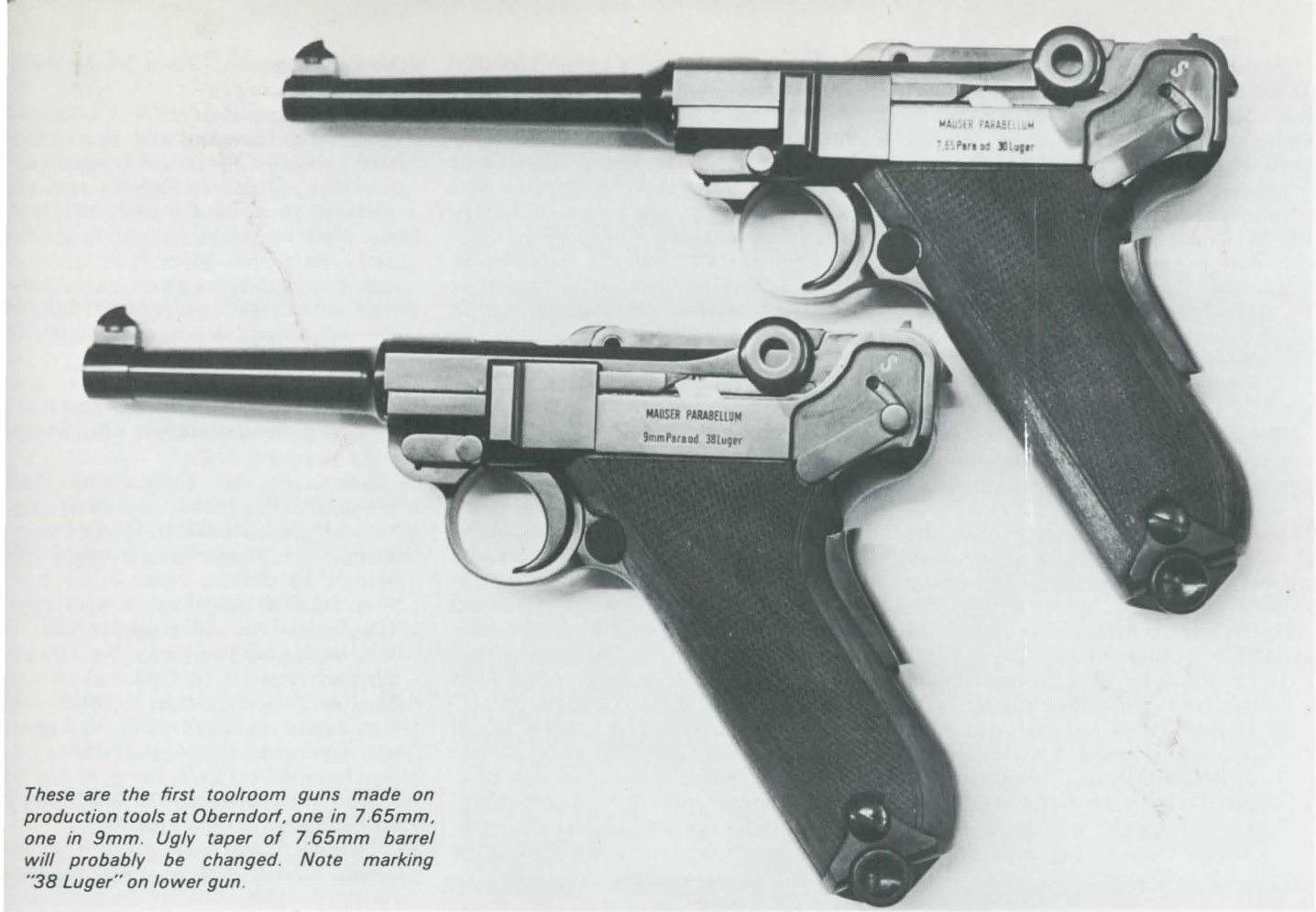
An *unbiased* appraisal shows that the Luger is delicate, jam prone, and prohibitively expensive to manufacture. By all logic, it was thoroughly obsolete by 1911. Yet it remained in service through the Second World War, and today is going into production once again.

When Mauser representatives, Parabellums in hand, turned up in the Interarms booth at the NSGA show in Houston this past February, most gunwriters and manufacturers as well were caught by surprise. The Parabellum, it was universally believed, could never



This is a 1942 Commercial Luger (note Mauser banner on toggle) and as such is out of Mauser's last commercial production, some 27 years ago.

In 1969, frames for the new Parabellum were racked in profusion in the Mauser plant at Oberndorf. The final product will differ in detail from that of 1942, but it will still be a Mauser.



These are the first toolroom guns made on production tools at Oberndorf, one in 7.65mm, one in 9mm. Ugly taper of 7.65mm barrel will probably be changed. Note marking "38 Luger" on lower gun.

be produced again. It is a machinist's nightmare, simply too costly and complex. A respected writer, happily ignorant of forthcoming events, went into print a year ago saying "it has been concluded that under present day costs each (Luger) pistol would cost at least $400 to produce." That would indicate a retail price tag of something over $1000 per gun. What sort of hat the writer conjured this number out of we don't know, but evidently his editor didn't think it so out of line.

Attempting to manufacture the original Luger once more at a salable price certainly ranks as a first rate gamble, if not an impossibility. Why Mauser would want to is obvious; how they expect to pull it off is somewhat less so.

Start with the fact that a market exists. There's an aura, a mystique, an almost hypnotic quality to the Luger that only one other gun can match. Some U.S. soldiers confidently toted plow-handle Single Actions of 1873 vintage off to Korea, trusting more in their mythical powers than in the demonstrable efficiency of more modern sidearms. Had the Luger been available, it would have been the choice of many on equal logic. Ruger and a host of others proved that the antiquated single action would sell on sentiment and silhouette alone to sportsmen, plinkers, and those who wished merely to enjoy the pleasure of possession. The commercial path was thus widened and paved for Colt's to reintroduce the Peacemaker.

It had been Mr. Ruger, sagaciously playing on the similarity of his name and Luger's, who introduced in 1949 his Standard Model 22 autoloader, with looks that are blatantly Teutonic. The looks, as much as the advanced design and reasonable price, of the Ruger Standard model earned it the popularity that made it the bill payer at the Southport plant for years thereafter.

More recently Erma in Germany and Stoeger in the U.S. have proved beyond doubt that the Luger looks sell.

Up to how high a price will sentiment sell a gun, and to how many people will it sell at that price? These are the questions which killed every attempt to put the Luger back in production since the Second World War. And until the answers are known, there will be a lot of fingers crossed at Mauser and at Interarms.

The Luger was not a dead issue after World War II by any means. Its corpse had been kicking vigorously ever since. And while this series will concern itself largely with the torturous and complex story of the Parabellum since 1945, we must look a good bit further back in order to put post-war events in historical perspective:

The Luger was derived directly from the Borchardt pistol, which was introduced by the Ludwig Loewe Co. of Berlin in 1893. Hugo Borchardt, the pistol's inventor, was a naturalized American citizen then employed by Loewe. Borchardt had immigrated to the United States with his parents when still a boy of sixteen years. In 1875, he became superintendent of the Sharps Rifle Co. of Hartford, Connecticut where he designed the Sharps-Borchardt single shot rifle. Later, he served as chief draftsman at Winchester. Returning to Europe, he became director of the Budapest Arsenal, but resigned this position and left Hungary rather precipitately after an alleged feud with General Fejervary, the Hungarian minister of war, over a lady's affections.

Georg Luger was born in the Tyrolean section of Austria in 1848. After leaving military service in 1872, he moved to Vienna and worked for many years with the Baron von Mannlicher, one of Europe's most brilliant arms designers. In 1891 Luger took an important position at the Loewe Co., and it may well have been he who brought Borchardt and his pistol to the attention of Loewe management. It is not clear whether Borchardt conceived and designed his pistol in the United States or in Europe, but the latter is somewhat the more probable.

About 1896 Loewe merged with the Deutsche Metallpatronenfabrik (German Metallic Cartridge Co.) of Karlsruhe to form the Deutsche Waffen und Munitions-fabriken (German Weapons and Munitions Co.) known throughout the world by its initials, DWM. Arms production remained at the old Loewe facilities in Berlin, while the Karlsruhe plant continued to make cartridges. Since this reorganization occurred in the midst of the Borchardt's brief six-year life span (1893-1899) the first pistols were marked "Waffenfabrik Loewe, Berlin," while later production carried DWM inscriptions. Combined production totals only a few thousand pieces.

Although the Borchardt pistol was tested by the U.S. Navy in 1894, the U.S. Army in 1897-98, and probably by Switzerland, Germany, and others as well, it never achieved either official adoption or widespread usage, and is notable for four reasons only:

1. It was the first commercially successful selfloading pistol.
2. It introduced the now universal practice of feeding cartridges from a detachable box magazine located within the pistol grip.
3. It was highly advanced ballistically, chambering a 30 caliber bottlenecked cartridge and firing an 85 gr. projectile at over 1300 fps.
4. It sired the Parabellum.

To Georg Luger, the faults of the Borchardt were self-evident. Long, ill balanced and ungainly, only the beauty of the workmanship mitigated the gun's incredible ugliness. The 90° grip made it point poorly, and military panels criticized the surfeit of screws in its construction. The central problem was the bulbous mainspring housing extending out over the shooter's wrist. This dictated the midships position of the grip, made the gun cumbersome, and looked like hell. Hugo Borchardt, so the story goes, stubbornly refused to admit that his pistol was anything short of perfect, and so lost the place in history that Luger gained.

Luger probably began redesigning the Borchardt late in 1897. Prototype transition pieces were made up in 1898 and 1899, and although one or both were evidently tested by Swiss military authorities in Bern in November-December, 1898 and again in Thun in May 1899, no examples of either transition model have survived.

The next year, 1900, saw the introduction of the first true Luger, and the first gun to wear the famous DWM scrolled cypher. If elegance were the measure of a fine firearm, then this pistol could not be bettered. The 1900 model was a beautiful gun, a seductive gun, and many discovered that with the Parabellum, love at first sight would be an enduring passion.

The Borchardt's monstrous recoil spring housing had been entirely eliminated; the recoil spring was now compactly housed just behind the magazine, inside the sharply raked grip. All screws, except for those holding the grip panels on, had been eliminated. A hold-open device was added, and the trigger-sear connection was somewhat altered. The barrel was shortened 2½" and overall length was reduced by 5". Weight dropped ten ounces from a ponderous forty to a pleasant thirty.

The Swiss, already well impressed with the Borchardt-Lugers they had tested, adopted the Parabellum on 2 April 1901, and let an order to DWM for 3000 pistols of the 1900 model. This, as we shall see, was one of the two most important single events in Luger history.

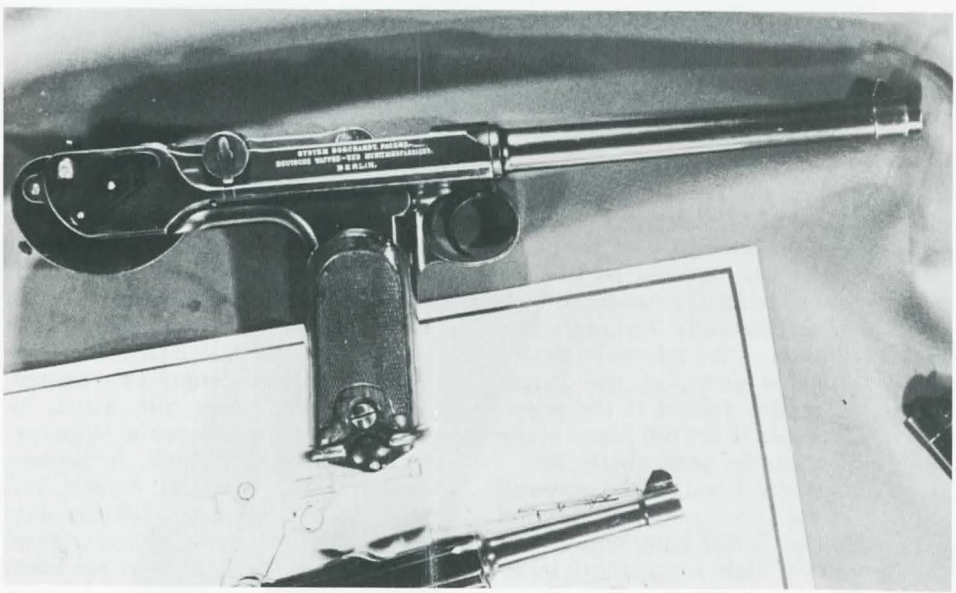
Hans Tauscher, DWM's controversial U.S. representative, was already hard at work. The month before he had met with Ordnance officers and had received an order for two test pistols and 2000 rounds of ammunition. Two weeks later, on March 18, the guns were tested at Springfield Armory with such favorable results that $15,000 was allocated to purchase 200,000 rounds of ammunition and 1,000 Luger pistols for field trials. The guns were delivered and issued, and that's the closest the Parabellum got to being adopted by the U.S.

Later, in the U.S. Army Pistol Tests of 1907, which had been postponed from 1906 due to Georg Luger's illness, the toggle breech pistol, this time in 45 caliber, came out well behind the Colt and Savage contenders. The Luger was not recommended for field trials, and an order for 200 pistols each was let to Colt and Savage. At this point, Savage decided they didn't hold the right cards, and opted out. Ordnance Corps, in order to give the formidable Colt some charming competition, diverted the funds meant for Savage to DWM instead.

Despite Tauscher's diligent if not frantic efforts, which continued into April of 1908, DWM decided they could not meet this order, which would have required considerable retooling because of the excessive girth of the U.S. cartridge. Probably their lack of interest resulted from the fact that Germany had at last joined the long list of European and South American armies which had adopted the Parabellum, and DWM had more business than they could handle—the second milestone. At any rate, Colt's famed 45 won by default, and the Luger, militarily, was thereafter a dead issue in the U.S.

Not so in Europe. Following the Swiss adoption, the Luger was tested by, in rapid succession, Sweden, Austria, Spain, Russia, and Canada. It was adopted by Bulgaria, Brazil, Chile, the Netherlands, and Portugal. According to DWM, Norway and Luxembourg as well adopted the Parabellum prior to 1906, but this remains in doubt. Another report indicating that some German officers were issued Lugers during the Boxer Rebellion of 1901 is also believable but unsubstantiated. The adoption of the Parabellum by the German Navy in 1904 paved the way for the final breakthrough which came in 1908, when the Imperial Army followed suit.

As the standard sidearm of the German war machine for 30 years, and of the Swiss citizens' army for 46 years, the Parabellum was fated to help write both the darkest and finest chapters of



This is the Borchardt, the design that started it all — toggle breech, magazine in grip, etc. Luger, in essence, simply compacted this gun, but did it beautifully.

European history. Georg Luger was awarded Bulgarian knighthood, amassed a considerable personal fortune, and was received at least twice by Kaiser Wilhelm II. Hugo Borchardt was, by this time, quite forgotten.

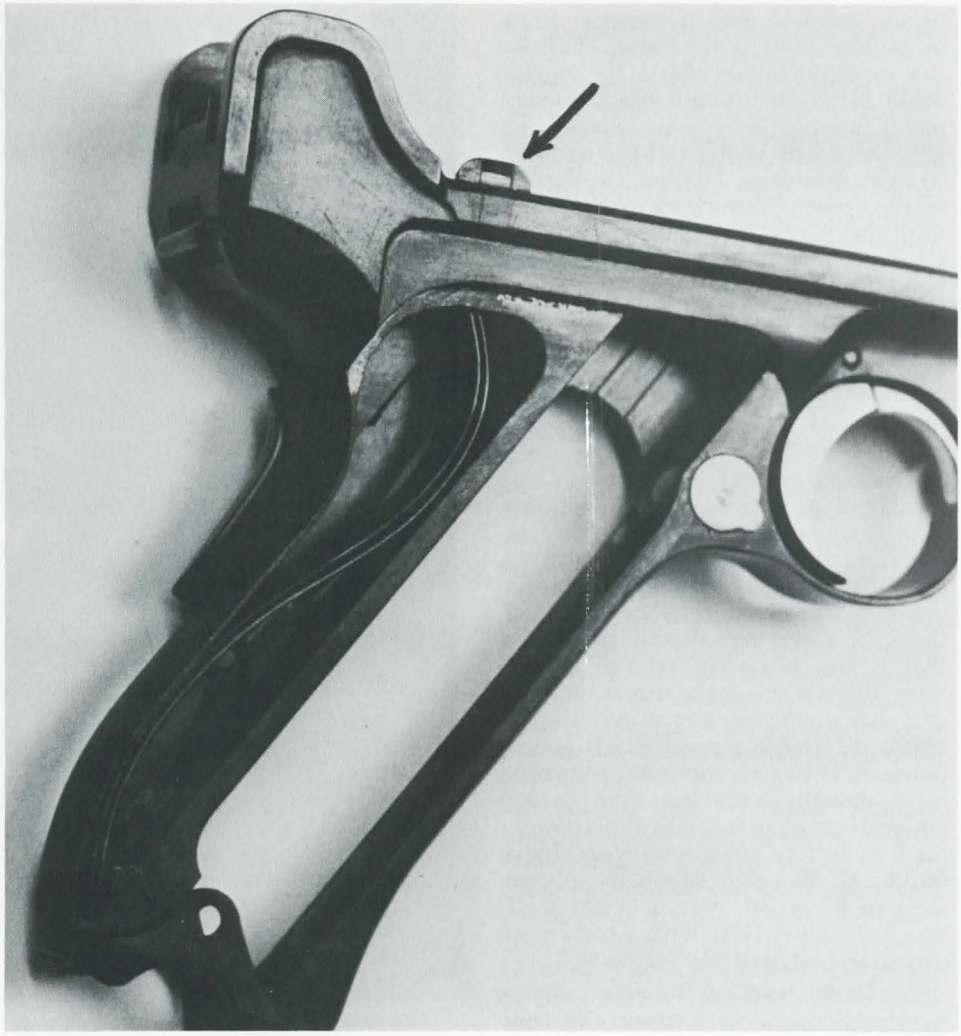
Although the Luger was, in essence, mechanically unchanged from 1900 to the introduction of the 1906 model, two intermediate models merit notation. The Model 1902 had a barrel lopped down to 4" from the previous norm of 4¾", and made bullishly heavier than before. Eleven hundred at most were made, of which 700 supposedly went to the U.S. commercial market. We would happily ignore this rarity except that it was the first gun to chamber the 9 mm Parabellum cartridge, the M1900 having taken the 30 Luger exclusively. Along with the increase in bore size came a change from four to six-groove rifling.

The Model 1904, again in 9mm, is even more obscure—Datig reports having seen only one, and it carried a two-digit serial number. This model wore a 6" barrel, a stock lug, and a 100-200 meter adjustable rear sight which was mounted on the rear toggle link. Its importance lies solely in the fact that, adopted by the Imperial Navy, it was the first Luger to see official German military service. As modified in 1906, and later in 1908, some 50,000 *may* have been made, although this figure is presently defying substantiation. At any rate, no more than a half handful of the original '04 issue were turned out.

The 1900, '02, and '04 pistols are referred to by the Germans as the "Old Models." 1906 saw a new model and a new ball game. Previous Lugers had used a laminated, two-piece flat recoil spring, the two pieces being riveted together at the top with the upper end of the front member forming a hook to engage the spring-breechblock assembly coupling link. The flat spring was a loser, prone to breakage and weakening. I've handled M1900's in which the spring was so weak that, even with the magazine out of the gun, the breechblock wouldn't fully close on more than seven out of ten tries, smartly released from a full-recoil position. Certainly these wouldn't have been up to the task of stripping off and chambering a cartridge.

At its lustiest, the recoil spring was, because of its design, almost untensioned by the time the breechlock was ¾ way forward. Inertia, rather than direct spring action, was supposed to close the breech and seat the cartridge.

Probably because there was little more than habit keeping the breech assembly down in battery position, the old model Lugers had a spring-loaded latch called the "toggle lock" built into the right toggle knuckle,



1900-1904 models had 2-piece laminated recoil spring — a poor arrangement indeed. Toggle-lock hook (arrow) was dovetailed into frame.

Close-up shows toggle lock ready to pounce down on frame hook, providing it makes it. This was the model first adopted by Switzerland in 1901.

which snapped over a standing hook on the right side of the frame. Without this mechanical lash-down, the toggles could easily be brushed open in normal handling. As it was, to open the gun the toggle knobs had to be pulled straight rearward, causing the barrel-receiver unit to move back in the frame, until the toggle latch cleared the rear edge of the frame hook, at which point the knee joint was allowed to break upward. The toggle lock was cute, expensive, and worked fine as far as it went. It didn't make the Luger chamber reliably, although those tested by the U.S. in 1901 did astonishingly well, considering.

The 1906 model introduced a coil recoil spring, necessitating the addition of a frame-mounted rocker piece to hitch it to the breechblock assembly coupling link. The coil spring was no panacea, for the Ordnance report of the 1907 pistol tests loudly complains that it too is nearly relaxed by the time the breechblock nears battery, and that chambering was still more a matter of inertia than of direct spring pressure. It was an enormous improvement, though, so much so that the toggle lock was abandoned as unnecessary. Such collectors' designations as Model 00/06, 02/06, and 04/06 mean that the gun is an '04 type or what have you built after 1906 with a coil recoil spring and without the toggle lock.

As Datig notes, a collector single-mindedly intent on keeping the genealogy straight might prefer to label the German service pistol P.08 as the Model 02/06/08.

The grip safety was the next feature to go, not being included on the P-08. The German Ordnance Corps also decided that the hold-open device could be got along without as well. They soon changed their minds and almost all P-08's originally lacking the hold-open were called back to the plant for rework.

With the adoption of the Luger by the German Army in 1908, DWM lost its status as sole producer. The Imperial Arsenal at Erfurt tooled up for Parabellum production. By the end of the First World War, these two plants reportedly had manufactured the stunning total of some two million P-08's, along with fifty million spare parts.

The Erfurt facilities were dismantled after the war, and the Allied control authorities harbored a noticeable grudge against DWM as well. Under the terms of the Versailles Treaty, Germany was allowed a 100,000-man army, and for sidearms, it turned to Simson & Co. of Suhl, the only authorized source from 1922 to 1932. Simson never actually fabricated Lugers, but assembled them from the enormous mountain of parts left over from the war. DWM, in the meantime, was permitted to manufacture for commercial and export sales.

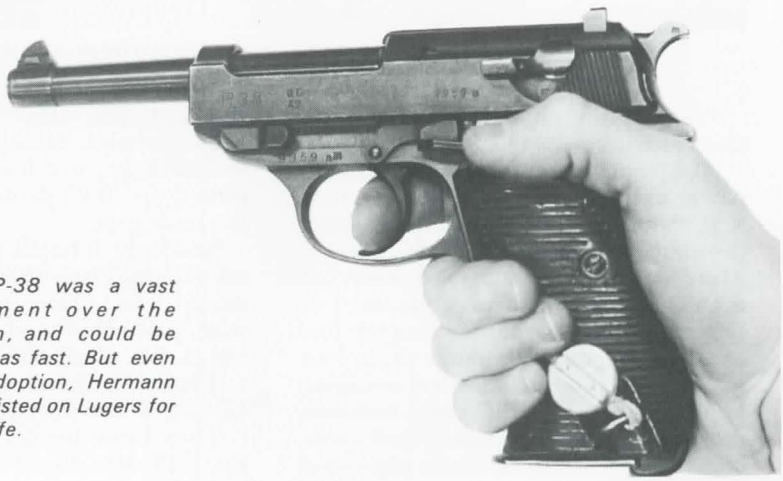
Mauser's old smithy, where Luger drop forgings were done. The French dismantled and demolished it after the war, hence Mauser now subcontracts this work.

Back in the States, the flamboyant Mr. Tauscher had been interned as an enemy alien with the outbreak of war, and his business was appropriated by the Alien Property Custodian. In 1922, the A.F. Stoeger Co. of New York acquired sole rights to the Luger in the U.S. About 1929, Stoeger registered the name "Luger" as a trademark, and began importing specially marked, new production pistols from DWM, and continued to do so for the next decade until the Nazi takeover in Germany claimed most arms production for the Third Reich military machine. For thirty years thereafter, Stoeger, with an unusual degree of either tenacity or foresight, managed to keep on hand just enough spare parts for the Luger to retain ownership of the name. Thus the new Mauser, when imported into the U.S., must be called *Parabellum* or some such—the Luger label being legally reserved only for the Wilhelm-designed 22 rimfire effort which Steoger tardily put on the market in 1968. (*I've not used the Stoeger pistol, and reserve a good opinion of it until I do. But I imagine Georg Luger would roll in his grave if he knew of this name game.*)

At this point in time—the mid 1920's—DWM was again the sole German plant actually manufacturing the Luger. In 1930, the management of the Quandt Group which owned both DWM and Mauser decided to move Parabellum production from Berlin to the vast Mauser facilities in Oberndorf. The migration took place on the first of May, 1930, under the direction of the remarkable Herr August Weiss, who brought with him all the Parabellum blueprints and production charts, 800 machines, 4,000 finished pistols, and untold thousands of component parts. Herr Weiss had first been employed by DWM in Berlin in 1904, and specialized on the Maxim machine-gun until World War I took him into the field of pistol production.

Save for Weiss himself, no personnel were transferred from Berlin for Parabellum manufacture, and as Mauser's new chief of pistol production, a position he was to hold until 1945 or later, it was Herr Weiss himself who sat down in Mauser's capacious *Schweden-bau* to teach his first recruit, a 15-year-old apprentice, how to build a Luger from the ground up.

The 1906 Model dropped the toggle lock of previous issues, replaced laminated recoil spring with stouter coil spring. Grip safety was retained.



Walther's P-38 was a vast improvement over the Parabellum, and could be built twice as fast. But even after its adoption, Hermann Goering insisted on Lugers for the Luftwaffe.

By 1934, production at Mauser was running smoothly, though the guns were still trademarked with the DWM cypher. Later that year, the DWM inscription was abandoned and most Mauser-built Lugers thenceforth were marked according to German secret coding procedures. As the codes were changed with every security scare, Mauser Lugers will be found coded variously: S (1934), S/42 (1934-36), 42 (1936-41) and "byf" (1941 and after).

A parallel line was run carrying the commercial Mauser crest trademark, and though a few were sold on the open market, most guns so marked filled foreign military orders, principally: 1170 pistols to the Dutch Navy from 1930-1939; 1000 guns to Persia (Iran) in 1936; 4000 or 5000 guns to the Netherlands in 1940. Smaller orders went to the Netherlands again, to Latvia, Sweden, Portugal, and elsewhere.

With another war approaching, a second, and as it turned out, quite unwilling Luger producer was added. The unpredictable *Reichsmarshall* Hermann Goering decided in 1934 or thereabouts that his Luftwaffe would be armed with Lugers to be supplied by the Heinrich Krieghoff firm of Suhl, in which he had either a personal or a financial interest. Krieghoff acquired some of the still plentiful spare parts left over from 1918, and cheerfully went to work assembling Parabellums. In 1939, in a typical example of Nazi irrationality, the tune was changed. Krieghoff reportedly was ordered by the *Waffenamt* to prepare another 15,000 Lugers for the Luftwaffe, but this time he must manufacture rather than merely assemble them. With more urgent things to do than attend to this rank foolishness, Krieghoff attempted to beg out, saying quite truthfully that they could not complete the order, and offering to fill a portion of it instead. He was ordered to have all 15,000 finished and delivered within the year—by the end of 1940.

Two years before, Walther's double action 9mm had been adopted as the P-38 to replace the whiskery old toggle gun. The German field services loved the Luger, but the Ordnance Department didn't; the wretch was simply too expensive and time-consuming to build. Mauser and the *Waffenamt* had been engaged in a shouting contest for the past half dozen years as Ordnance kept forcing the price down, much to the detriment of Mauser's profit sheets.

P-38 production was scheduled to commence at Mauser in July of 1941; the Luger was to be dropped from the line in June of 1942. In fact, the Parabellum remained in production until that December. The month before, November of 1942, the army accepted delivery of 1000 Lugers they hadn't asked for. A final 4,000 were fitted up in December, but the Army didn't want to be bothered with them, and Mauser was authorized to sell them to Portugal, where they were joyously received and dubbed the Model 943.

Meanwhile, Krieghoff, two years behind on Hermann Goering's order, was still in there slugging valiently. Two years later, in 1944, he was still at it, and had serial numbers up nudging the 12,000 mark, still some 8,000 shy of completing the order: he never made it. As far as is known, Krieghoff actually manufactured pieces where he'd left off with those which had previously been assembled from available parts. Krieghoff's pathetic efforts in 1944 mark the last actual Luger production in Germany. Goering added insult to years of injury by wearing a Smith & Wesson revolver when he surrendered.

According to German Military Monthly Acceptance Sheets for the P-08 which Donald Bady provided to Fred Datig, a total of 412,898 Lugers were delivered to the German armed forces from September 1939 to December of 1942 when production halted at Mauser. This includes the final 4,000 which went to Portugal. Adding the above to known export figures—principally to Portugal, Sweden, Latvia, and the Netherlands—then tacking on Krieghoff's gesture, we come up with a total of some 440,000 Lugers manufactured between 1928 and the close of the Second World War. Were we to estimate the number supplied by Simson to the post-Versailles *Reichswehr,* unrecorded commercial and foreign military sales, and the untold thousands that must have been put up from parts here and there during the confusion following the First World War, then the total number produced between late 1918 and the end of the Second War must be easily a half million.

The Luger had served Germany well. It was long past time for the curtain to be dropped and for the old soldier to fade away. That's not what happens.

DON'T MISS PART II NEXT MONTH — GUNFACTS EXCLUSIVE!

THE PARABELLUM STORY

(Continued)

These are the first toolroom guns made on production tools at Oberndorf, one in 7.65mm, one in 9mm. Ugly taper of 7.65mm barrel will probably be changed. Note marking "38 Luger" on lower gun.

This is Part II of a detailed, on-the-spot examination of the post-WW II production of Georg Luger's most famous design.

by Jan Stevenson

PART TWO:

THE PARABELLUM STORY

by Jan Stevenson

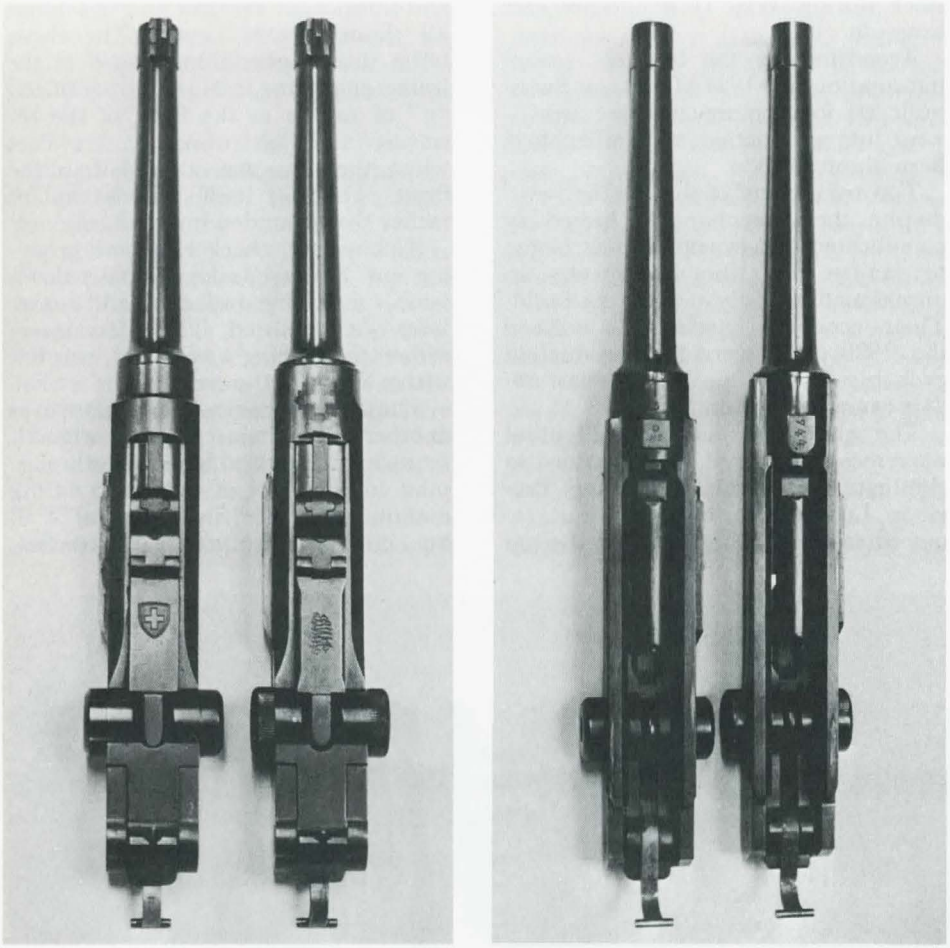
Oberndorf fell to the French on the 20th of April, 1945. For two and a half years Mauser had been nesting on a heap of Parabellum parts that no one, least of all the German army, had wanted. As soon as they learned of this the French developed an overwhelming and quite unexpected interest in the Luger—such is the fascination of the gun. Herr Weiss and a crew of 400 men were kept at work in the *Schweden-bau*, under French guard, and had assembled some 5,000 pistols by the time they ran out of receiver forks in 1947. (They also put together a lot of other pistols) Roughly 100,000 parts, including a few frames, remained, and these all went to France along with the finished pistols. Meanwhile the French were doing land-rush business with earlier Lugers taken from German troops or confiscated from civilians. Many of these must have gone to France intact; thousands more were disassembled, and shipped as parts in sorted batches. As late as 1957, by which time nearly 70% of the old Mauser plant had been dynamited flat, the French still had a few Germans at work in Oberndorf tearing down Lugers and sorting the parts. A heck of a lot of pistols can be disasssembled in ten years.

The French postwar involvement with the Luger was serious enough that new Luger magazines were produced in France for awhile. Exactly what the French military had in mind for the Parabellum I have no idea. Certainly they weren't sold commercially in France, and so far as I know only a few have been seen since. As put up at Oberndorf, the French Lugers had a dull finish and most carried the Mauser "byf" code. Random markings —whatever came of the parts bin— were frequent. These guns were not proved in Germany, but according to a French source, they are identifiable by a small 5-pointed star which was stamped ahead of the serial number on the left front of the receiver.

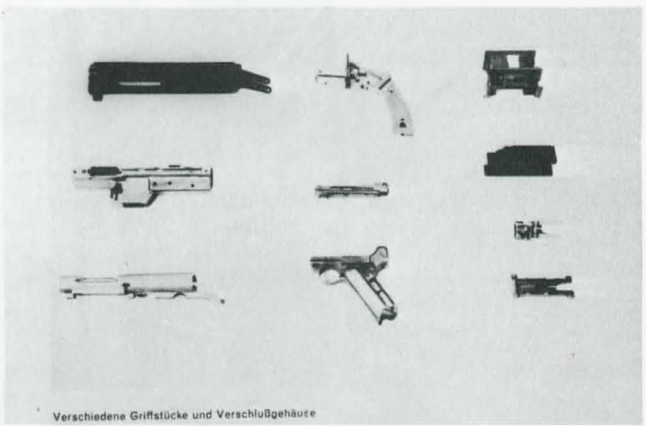
Meanwhile, Krieghoff found themselves briefly within the American occupation zone until we magnanimously pulled back and turned Thuringia— the center of German small arms production over to the Soviets. It is reported that several hundred Lugers were assembled for our transient forces, and that some of these guns had no markings whatsoever.

Controversial Model 1924 Swiss is easily recognisable by its flatsided grips, dull finish, and "Waffenfabrik Bern" inscription on the front link. Despite the label, it probably went into production in 1913.

The 1929 Swiss, replete with tool marks and red plastic handle, is no thing of beauty, and that, says Stevenson, was the Luger's prime purpose. Note straight front strap, flat safety, and total absence of knurling



Swiss 29 receiver assembly, compared with a DWM 1906, shows smooth toggle knobs and lathe-turned receiver ring. These, plus unthreaded alignment shelves on barrel shank and inside receiver ring, were virtually the only alterations. Both, unlike the P-08, have the long (21mm) receiver ring. Underside of same units shows loss of front railing caused by lathe-turning the ring, and simplified, square receiver lug on Swiss pistol.



This page from an SIG prospectus of fairly recent distribution clearly shows the Luger frame and receiver fork. By the time Mauser got onto it, SIG had scrapped their tooling.

Wraparound 06 trigger with machined-on mounting pin was ridiculously expensive. Though they nose-bobbed it, the Swiss couldn't make it much cheaper. Mauser will prudently cast this part.

The Russians, in the usual vengeful and shortsighted fashion of that era, promptly divested the plant of machinery, then flattened it. It is doubtful that Krieghoff's blueprints survived, and virtually certain that his tooling was dissipated in Russia and put to mundane tasks. The East German *Volkspolizei* were armed with the Luger through the late 1950's, and it is possible though unlikely that some of these may have been assembled from Krieghoff's spare parts stock. It's extremely unlikely that any Parabellums have been manufactured within the Soviet sphere of control since the Second War—Russians are much too pragmatic for that.

With the publication of Fred Datig's monumental and scholarly text *The Luger Pistol* in 1955, the Parabellum came of age as a serious collector's item. Added to its essential mystique and historical significance was the fact that it had been made in a profusion of variations; collectors soon priced the non-ordinary Luger out of reach of the shooting public. Germany, as a source, had been bled dry by the French, and enterprising importers had fairly ransacked the rest of the free world. The market potential in both the U.S. and Europe was burgeoning, and then began some ten years of intricate and uncoordinated maneuvering designed to put the old mechanical maze back in production.

In 1956, pursuing academic rather than commercial interest, Datig had discussed the question with both Mauser and SIG management in Germany and Switzerland respectively. Both said that tooling up anew for the Parabellum would be fun but entirely impractical. It was a thumbs-down answer both places, yet geographically Datig was on the right track, one which many would follow, for Switzerland seemed the last best hope for a new Luger.

Back as early as 1911, with the dark thunderhead of impending war looming ominously over Europe, the fiercely isolationist Swiss began to fear for their arms supply. Their Schmidt-Rubin service rifle was manufactured at home, for many obvious reasons, but the Maxim machine gun and the Parabellum pistol were both bought from Germany. Swiss authorities began negotiating a license arrangement with DWM, and received the full production package—blueprints, work sheets, etc.—for both guns. The Maxim, known as the MG-08 in Germany, was dubbed the M11 by the Swiss and was put in production by *Waffenfabrik Bern,* the federal armory, in 1912. Unfortunately, the chronology on the Swiss Luger is not so clear.

Switzerland, we recall, adopted the Parabellum in 1901 and started off

with an order for 3000 pistols of the 1900 Model. The improved 1906 pistol was much more to their liking, but at this point the tale gets mucky. Ten thousand two hundred fifteen pistols, numbered from 5001 to 15215 and believed to be 1906 models, were delivered to Swiss authorities by DWM-Karlsruhe. Since the Karlsruhe branch is not known to have ever manufactured arms, we assume either that the paper work was handled there or that for some long forgotten reason this particular order touched down at Karlsruhe en route from Berlin to Switzerland. An additional 99 or 100 pistols, numbered from 5001a to either 5099a or 5100a, depending on your source, likewise came through, and it's moot whether these were 1900's or 1906's.

At this point the Swiss Model 1924 arrives on the scene. It's an easily recognized gun. The finish is a dull blue, the receiver ring carries no marking, and "Waffenfabrik Bern" surmounted by a small, plain Swiss cross, is stamped on the top of the front toggle link. The grip panels, rather than being gracefully curved and checkered on their entire surface, are flat sided and checkered only on this plane, leaving an uncheckered border of slightly less than ½" to slope down and meet the straps. According to Datig, the model of 1924 went into production in that year, continuing through 1933, by which time exactly 17874 pistols, numbered from 15,216 through 33,089, had been manufactured. The figures figure, but the dates are doubtful.

Worst of all, the Swiss don't even officially recognize a model of 1924. The Bern-issued gunsmith's manual opens with the statement, "There exist three models of Swiss Lugers: (a) Model 1900, (b) Model 1906, (c) Model 1929." The manual, of course, was prepared for mechanics rather than historians, but inquiries to Bern itself have singularly failed to run the origins of the M1924 designation to ground.

The only recorded alteration of the pistol occurring in the mid-1920's took place on 1 November 1927, when the Swiss changed their gauging practices. This affected primarily the barrel. Interior dimensions henceforth were read outward from the standard. Thus prior to this date the bore was a nominal 7.65 mm with a plus-minus tolerance of .03 mm. After 1 November 1927 the bore was 7.62 mm with a plus-only tolerance of .05 mm. This was a change in measuring procedures, not in the gun, save that allowable slop in bore diameter was cinched down a hundredth of a millimeter. The DWM drawings were completely redone, but the gun was not. The P-08 trigger made from special section or profile stock during WW II is another rare example.

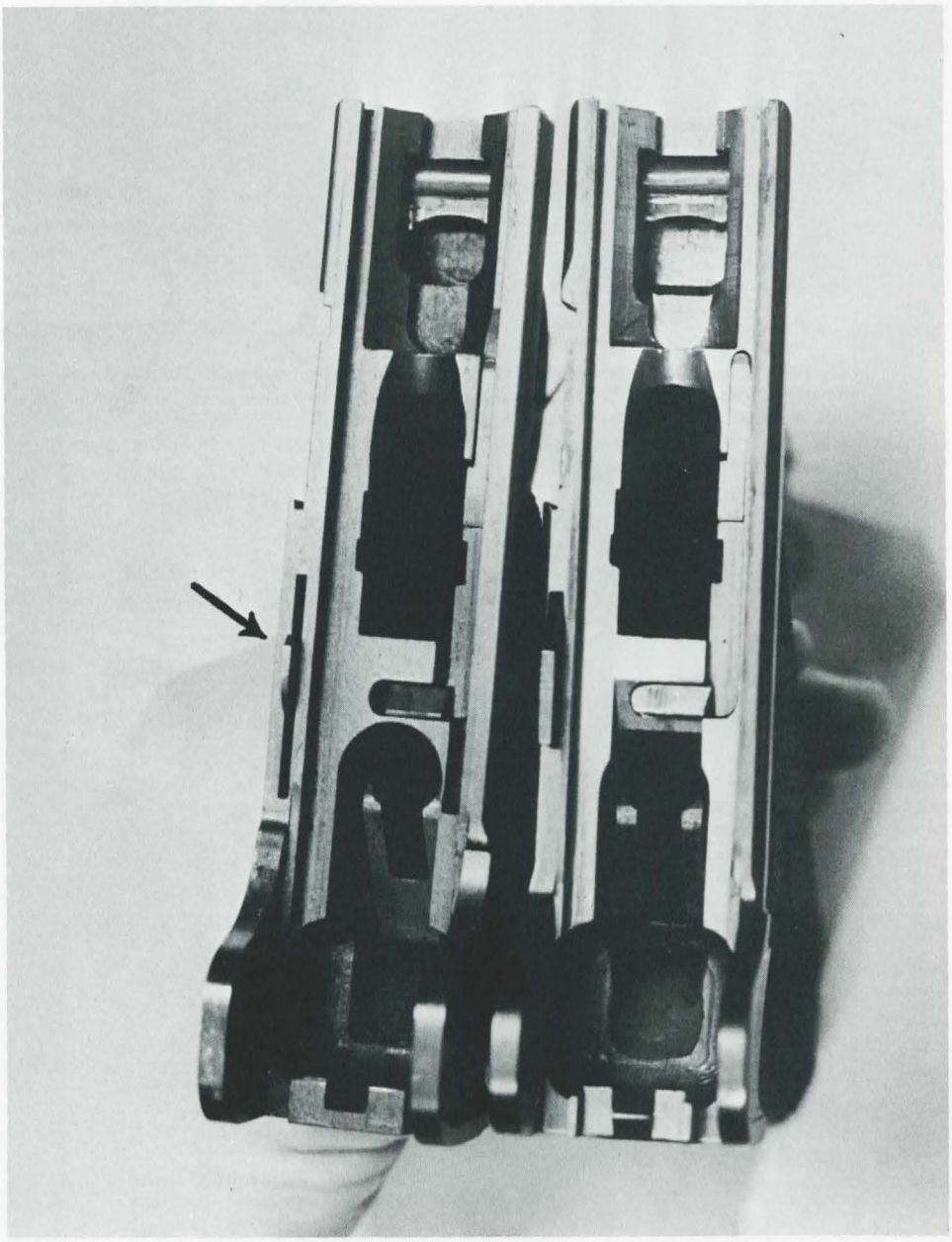
According to the best of current information, the 1924 Model—or Swiss-built '06 for a more accurate term—went into production at Waffenfabrik Bern about 1913.

Toward the end of the 20's the Swiss, despite their penchant for incredibly complicated and expensive guns, began to realize that the Luger was an unreasonably costly wretch to build. Their economy model was dubbed the 1929, and went into production probably in 1931 or '32; the last 06-24's came through in 1933.

The alterations on the 1929 pistol were mostly external and intended to eliminate unnecessary machining. Previous Lugers, for instance, had required several milling cuts on the top and sides of the receiver ring to achieve all those elegant bevels. The Swiss lathe turned everything ahead of the frame engagement lug. This sacrificed ⅜" of railing at the front of the receiver, and left unsightly crevasses when the gun was viewed from the front. The lug itself was cut square rather than rounded on the back.

All knurling, checkering, and grooving on the goggle knobs, take down latch, magazine release, and safety lever were omitted. The safety lever, rather than being a half oval, was flat with a knob on the end.

The trigger cover or sideplate was another silly item on the original, requiring the tool to be constantly dipping in and out of the work during manufacture. The Swiss got rid of all but one of these tortuous exercises,



Frame assemblies of 29 Swiss (left) and 06 DWM (right) show nothing like internal identity. Simplified action of grip safety in Swiss gun, and longer accommodating cut in frame (arrow) are noticeable changes; see also detail of other cuts and bevels.

generally running the cuts all the way across the piece. This has its unsightly aspects, and sideplates from the 29 will not interchange with any other Model.

The front strap shows the most visually obvious alteration, being perfectly straight rather than gracefully rounded at the toe.

Another significant change affected the barrel. Previous models had the barrel shank threaded all the way to the shoulder. The 29 left an unthreaded bearing surface behind the shoulder before the threading began. This flat was intended to mate an untapped surface inside the front of the receiver ring and automatically true the barrel in the receiver.

(There's another problem we might as well kick around at this point. The Swiss, in many respects, were creatures of habit. They never saw reason to abandon the grip safety, nor to alter the slim 4¾" barrels with four grooves, right hand twist, which came on their first 1900 Models. They never changed the 21 mm barrel shank and receiver length either. When the 9mm Model of 1902 was introduced, DWM shortened the barrel shank and receiver ring to 18 or 19 millimeters. The front of the frame was hacked off to match, and rifling was changed from four to six grooves. For some reason, the 9mm Model 1904 reverted to the long receiver type. Early Model 1906's likewise had the long receiver, but sometime during the 1906 production, probably prior to 1908, all barrels, receivers, and frames were changed to the short type. The new Mausers will have the long (21 mm) receiver. Since virtually all of the two and a half million Lugers now in circulation have the short barrel and receiver, gunsmiths attempting to fit the new long-shank barrels to short receivers, or new long receivers to short frames, will find a bit of stock removal necessary.)

The Swiss didn't officially replace the Parabellum until 1948, but tests had been going on ever since early 1944. Actual production of Swiss Lugers had ceased some four years before with the start of the war, although Bern was still fitting a few up from parts until 1950. Complete pistols were available new from Bern as late as 1958.

Frames were what they ran short on first, and SIG at Neuhausen had been the sole producer of this part. With SIG fully occupied by war production, Waffenfabrik Bern decided in 1943 to undertake frame production themselves. They contacted the Von Roll-Werke in Gerlafigen, who had supplied SIG's rough forgings, but discovered to their mild dismay that the frame forging dies were no longer usable. Rather than going to the bother of making a new set of dies, Bern dropped the whole idea. Some 28,000-30,000 of the 1929 Model had been built, depending again on who has the more accurate list of serial numbers.

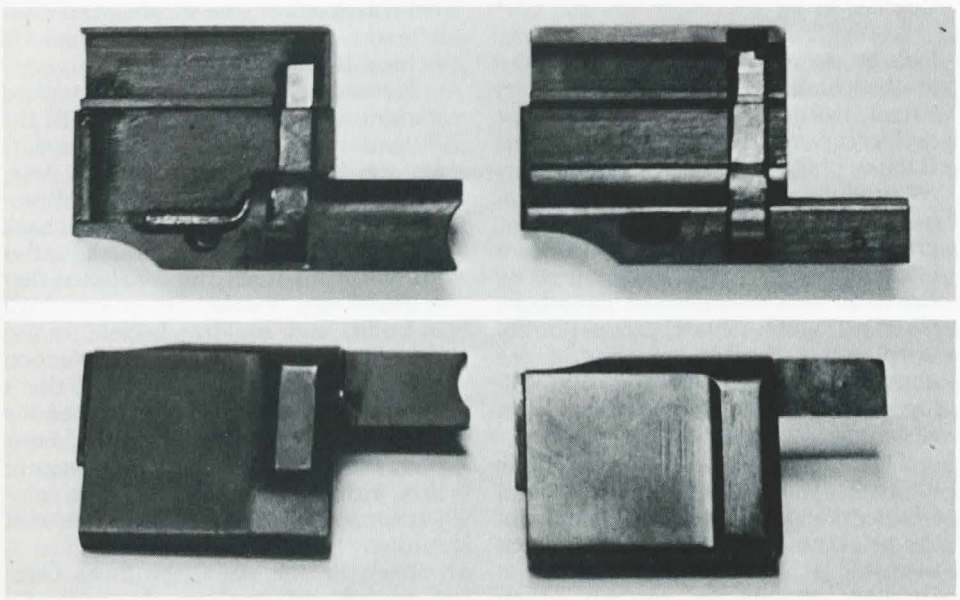
All the Swiss Parabellums, all approximately 61,000 of them, had been chambered for the 30 Luger bottlenecked cartridge. The SIG pistol which replaced these was a 9mm, with a 30-caliber option to help burn old ammo supplies. This caliber overlap worked both ways, and the 9mm M29 is only a slightly less mysterious variation than the six or a dozen lost Baby Lugers that Herr Weiss built so many years ago. Bern did definitely make some three hundred 9mm barrels to be fitted to the pistols of citizens or target shooters who might prefer the larger caliber. I've seen one of these 9mm 29's and know of three others. This leaves 290-odd unaccounted for, and diligent Swiss collectors have been unable to locate them. According to a better than average rumor, most of these barrels were fitted to existing frames and the entire lot of converted pistols wound up in a Swiss ordnance depot where they've since been forgotten about, doubtless to come to light in some future inventory taking. Whether this hypothesis is myth or truth, well, that future inventory will tell.

Another virtually unknown run of Swiss Lugers was the E series. At least a hundred were made up by the Military Technical School, each slightly different in construction to test out various design ideas or manufacturing techniques. Five have turned up to date.

Waffenfabrik Bern was also constantly dabbling with experimental designs, and most of their efforts were num-

Grip safety on M29 was stamped, a sensible move. Only function of thumb safety is to block grip safety, and a stamping works just fine for this.

Long Swiss grip safety wraps around and disappears under stocks on right side. Mauser will do likewise, but will shorten safety for an 06-ish look.



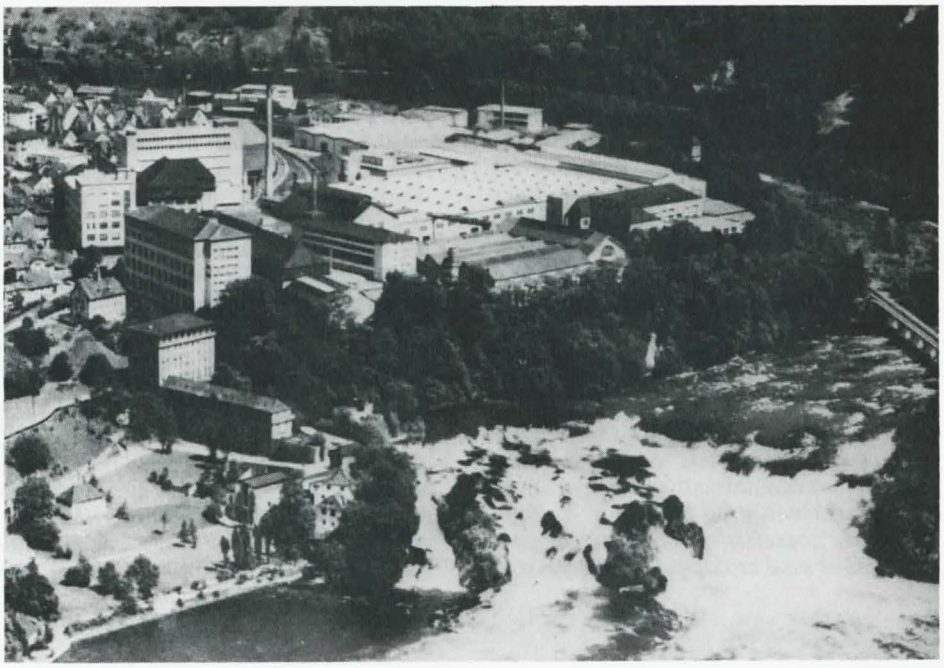
Swiss sideplate (right) is obviously redesigned, with cuts running all the way across the work. Will not interchange with any other model.

bered in a V series, standing for *"Versuchsmodell."* Occasionally a Swiss Luger will turn up with a serial number apropos of nothing at all. Very recently, I examined a M1929 numbered 100,000. Its authenticity is beyond any doubt whatever, and besides the serial number, which reflected probably nothing more than the Waffenfabrik's sense of humor, there was nothing unusual about the piece.

Waffenfabrik Bern managed to stockpile an enormous quantity of spare parts before the Luger was finally dropped, and for the past quarter century Switzerland has served as a Parabellum parts depot for all of Europe. Fortunately the internal components of the Luger never changed much at all, even in the 1929 Model, and most parts, with the conspicuous exception of the vital sideplate, are roughly interchangeable. Evidently a goodly supply of sideplates was left over from the 06-24, for the latest *Dynamit Nobel-Genschau* (Germany's largest parts house) catalog lists it complete for $20; the receiver fork lists for $21.75, and only the frame is unavailable. Attesting to this German firm's source of parts is the fact that their catalog illustration is a poor reproduction of the parts list that Bern supplies to Swiss gunsmiths. DNG changed only the order numbers.

When Waffenfabrik Bern finally ran out of Lugers, the Swiss had been shooting the toggle gun for well over a half century, and had no intention of breaking the habit. The price of second-hand Lugers in Swiss gunshops has steadily spiraled, so that it's almost impossible to find one in good shooting condition for less than $125. So enamored of the Parabellum are the Swiss that many Swiss officers prefer to pay the difference for an 06-24 rather than putting out the lesser tariff for the issue SIG. I saw 1968 films of military qualification firing in one of the cantons, and the Luger still clearly outnumbered the Neuhausen pistol. There's no question as to which gun is the more efficient. It's that old mystique again—in Swiss eyes the Luger is the ultimate handgun. Attesting to its widespread usage, the latest Bern-issued gunsmith's manual for the Parabellum is dated 1965.

A vigorous market existed in Germany as well, with nothing much to fill it. By 1960, Second War P-08's were bringing $100 in German gunshops, and the price for a good one is up to $150 at this writing. These facts weren't lost on the *Erma-Werke* at Dachau, who had been marketing 22 caliber and 4mm rimfire conversion units since about 1910, and who had heavily committed themselves to the toggle-breech priniciple with their post-war line of cast zinc Luger look-alikes in 22 Long Rifle.



Vast SIG complex at the Rheinfalls was the only plant in Switzerland to make the Luger frame.

About 1960, a substantial lot of diverse Parabellums found their way out of Bulgaria into neutral Austria where they were quickly pounced upon by Interarms' purchasing agents. Those deemed too mangy for the U.S. market were sold to Erma for $15 each. The exact quantity involved is still unclear. Erma's managing director insists that they got only 1,000 pistols from Interarms, and of these only 800 were salvageable. Interarms' representatives, on the other hand, recall selling between two and three thousand pistols to Erma, and note that since the transactions took place while Erma was changing hands, present management may be cognizant only of the later shipments.

At any rate, Erma, taking a closer look at their merchandise, was aghast at the condition of the pistols. Every barrel, without exception, had to be replaced, and for this purpose the Dachau plant tooled up for Luger barrel production. Most of this shipment came out with 30 caliber tubes. New grips, sights, magazines, and take-down latches as well were manufactured by Erma in order to get the guns back together again. Since production of sideplates or frames was out of the question, some stock buildup by welding was reportedly done on these parts to achieve a proper fit.

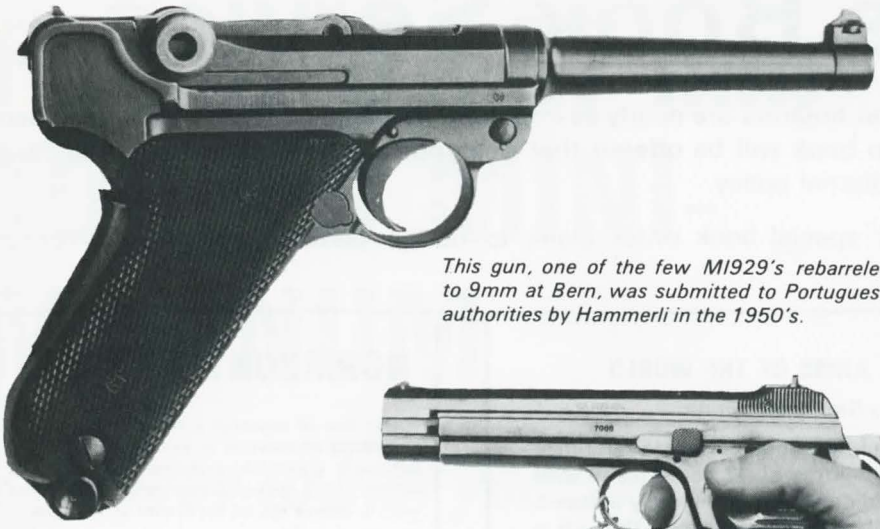
The Bulgarian reworks went on sale in 1965. U.S. Army Rod And Gun Clubs accounted for a large portion of the total, and to American servicemen they sold at about $40 each. On the German commercial market, they started off at $50, but Erma was forced to jack the price first to $57.50 and finally to $67.50 as the cost of refitting them rose far beyond original expectation.

The guns were delivered to distributors in military style wooden cases. Since they were put up from parts, markings were an absolute hodgepodge. Erma themselves applied no marks whatsoever, but the guns are easily identifiable since they carry German postwar Nitro proofing and the Munich proofhouse stamp, with circa 1965 dating.

Erma continues to manufacture and supply all of the parts mentioned above, a large portion of which previously went to Dynamit Nobel-Genschau. All distribution of Erma-built parts is now being taken over by Wilhelm Hebsacker, the surplus arms dealer—sort of a miniature Interarms—in Schwabisch Hall.

Hebsacker, himself a Ferlach-trained gunsmith, had sold some 500 of the Bulgarian reworks. Recognizing a market as it stared him in the face, Hebsacker sponsored one of three European efforts to put the Luger back into production from scratch. After fairly careful study, he concluded that a new Luger would cost at least $125 to build, and couldn't be sold for less than $300. How much of a production run he was counting on, we don't know, but the estimates squelched the whole idea. Hebsacker's figures, however, take on considerable interest since they form an excellent base for comparison with other postwar Luger cost studies.

Back in the Alps, the Swiss Gunsmiths' Association, acutely aware of a good thing going to waste, petitioned



This gun, one of the few M1929's rebarreled to 9mm at Bern, was submitted to Portuguese authorities by Hammerli in the 1950's.

SIG SP47/8 is the finest 9mm in the world in Stevenson's opinion, but Swiss army officers, who can get it cheap, still ransack gunshops for 06-24 Lugers.

Waffenfabrik Bern in 1960 to put the Parabellum back in production. At about the same time a movement was reportedly gaining some momentum in Swiss Government circles to close the the armory down as an economy move. With this possibility supposedly hanging over them, the Waffenfabrik took the gunsmiths' request seriously indeed, and the cost quote they later delivered was without doubt rock bottom for the quantity envisioned.

What they had in mind was a simplified 1929 Model. Bern queried foundries and outside metallurgists on the feasibility of using cast parts and section stock, while their engineers went through the M1929 with a magnifying glass looking for corners to cut. Many of the component parts of the original Parabellum, it turned out, were complex for no evident reason. The extractor, for instance, has an unnecessary cheek on either side; Bern straightened it out, and many parts took a similar face lifting. Some components, they found, could be built much more economically in two pieces than one.

When it all came out of the wash, the Waffenfabrik decided they could give the gunsmiths a minimum order of 10,000 pistols for $115 each. That the Waffenfabrik would have taken no profit on this deal is attested to by the report that in response to an American inquiry for costs on a similar run of 10,000 pistols, they quoted at $200 each. At this more than reasonable price, though, the Swiss gunsmiths could gang up for only three to five thousand guns. Certainly a far greater market than that existed in Switzerland alone, not considering export possibilities. The problem was that economically the gunsmiths' association was a penny-ante outfit without the capital to finance a significant initial order. That's where the project died.

Meanwhile, a slim hope appeared that the Parabellum might gain a new lease on life as a military arm. Around 1963-64 Golden State Arms in California purchased a lot of some 1200 Lugers from the Portugese Police. The Portugese Army, though, has steadfastly refused to part with theirs, and the M943 as well as the cherished earlier models are still in service in Portugal, though supplemented of late by postwar Walther P-38's.

Back in the '50's, Hammerli of Switzerland made a bid for this market, and sent one pistol, a Swiss 29, rebarrelled at Bern for 9mm, to Portugal for military tests. What the outcome was, no one seems to recall but no orders ever materialized.

To many American importers, Hammerli seemed the ideal place to get Lugers built again. The Portuguese gesture demonstrated their interest in the gun, and since they are known for the incredibly precise, almost pocket-watch quality of the machining that went into their famed free pistols, surely if anyone could build the Parabellum to old-world standards, Hammerli could. And although Hammerli had never built the Luger—had never even done subcontract work on components, there was that great mass of tooling, dies, drawings, jigs and gauges in Switzerland which would have been theirs on request. Thus the late '50's and early '60's saw a small drift of eager American entrepreneurs entering Hammerli's humble portals and exiting again almost immediately.

Hammerli definitely ran cost studies on the Parabellum, but what the results were they profess to have forgotten. Without doubt, Hammerli costs far exceeded the Hebsacker figures. Hammerli would have been enchanted to have received a firm order for 20,000 pistols, and a solid request for 10,000 would have seriously interested them. For less than 10,000 pieces, it doesn't even pay to tool up for spare parts production, as Erma and others have emphatically noted. But when they heard the price, the Americans saw the supposedly vast U.S. market dwindling before their eyes, and proceedings went no further. For them, too, Hammerli's quotation must be a bad memory today.

What they should have realized in the first place is that Hammerli was the last logical place to turn, for the Luger cannot be manufactured again as it once was. Machine and man hours cost dearly at Hammerli as elsewhere, and to put the Parabellum back on the market, the most advanced manufacturing techniques, in which Hammerli has but little experience, must be exploited to the fullest in a diligent effort to hold costs to a minimum.

Interarms realized, as others should have, that Mauser (who besides being the only major Luger producer after the First World War, had been part of the Ludwig Loewe combine before the Borchardt had even reached the drawing board) was the only company who could build the Luger anew. Mauser had virtually unlimited capital to absorb initial expenses and the engineering and production capability to blend ultra-precise workmanship and modern methods and metallurgy in any desired proportion, along with a management willing to gamble on such high-risk projects as they had so well proven with the Model 66 bolt rifle. The only managerial stipulation was that the deal had to show healthy profits somewhere along the line.

Interarms, the Virginia-based importers, gauged the U.S. and world markets favorably, and was one outfit with plenty of capital to put where their mouth was. They travelled to Oberndorf prepared to negotiate an absolutely staggering contract.

DON'T MISS PART III NEXT MONTH — GUNFACTS EXCLUSIVE

THE PARABELLUM STORY

DWM-built 1900 Model — the first Luger and one of the most beautiful guns ever made — shows characteristic dished back toggle knob with inset toggle lock. Magazine is a later version.

by Jan Stevenson

This is Part III of Gunfacts' exclusive examination of the processes and the pistols that have led to the new Mauser Parabellum

ART THREE

THE PARABELLUM STORY

by Jan Stevenson

Mauser and Interarms started kick-
g the Parabellum question around
1962.

Direktor Lubenau viewed the project
vorably, but since he was nearing
tirement he felt he'd best not make
decision which might well hang his
ccessor. In 1964 *Direktor* Adam took
er the *Mauserwerke*, and the Para-
llum and HSc projects both got the
sitive go-ahead. The HSc, obviously
e more manufacturable of the two,
ok priority, and the M66 rifle, which
this time was giving severe problems
manufacturing and rather dismal
curacy, spread Mauser's engineering
aff fairly thin. Mauser and Interarms
presentatives met about three times
year thereafter to keep up a bit of
omentum.

On the 21st and 22nd of February,
67, Mauser held a press conference
Oberndorf to which some sixty-five
presentatives of the European shoot-
g press were invited to witness the
rmal unveiling of the M66 rifle. Dur-
g the course of the conference, Maus-
announced their plans to put the
ger back in production. Their pro-
sed delivery date to Interarms of
rly '67 already drifting past, they
w hoped to have it available by
rly '68. It would be a faithful copy
the P-08, and would retail at $300.
auser must have gagged on the
mber, for it duplicated Hebsacker's
timate exactly.

The P-08 was what Interarms
anted. Mauser dusted off what old
cond War blueprints and worksheets
err Weiss had managed to abscond
th before the French destroyed them,
d began to work from there. I recent-
examined P-08 engineering drawings
Mauser dated 1967.

The deeper Mauser got, the more
possible the project looked. Their
oughts drifted toward Switzerland,
ravaged by war since Napoleon's
y. With the acquisition of what the
viss must certainly have in storage,
rhaps just slightly dusty, Mauser's
rliminary headaches and expenses
ke would evaporate, and the project
uld get back on schedule. It wasn't
at easy.

To start with, Waffenfabrik Bern,
e obvious first stop, had been what
e Swiss call a *"kopfwerke"*—literally
anslated "head works." They assem-
ed the gun, and manufactured a few
sential parts such as the receiver fork,
but mostly they coordinated. Actual production of the components of the Swiss Luger was farmed out to 110 subcontracted firms. SIG, for instance, was the only plant which made the vital frame. In a manufacturing prospectus published sometime in the late 1950's or early '60's, SIG had shown a photograph of a Luger frame and receiver fork, in the white, probably to illustrate the sort of intricate metalwork of which they were capable.

Mauser went to the Swiss too late. The year before, 1966, SIG had hauled all their old Luger jigs, dies, and gauges out and put the torch to them —they needed the space. The machines had long since been put to other uses. Moreover, SIG was decidedly not interested in subcontracting the frame for Mauser. Besides being tied up on other work, SIG, it is widely felt in Switzerland, has always opposed a reintroduction of the Parabellum for fear it would cut heavily into sales of their own SP47/8.

Mauser wound up back at Bern. When Bern subcontracted a firm, they supplied one copy of the blueprints and one of each gauge necessary for every measurement and inspection required in manufacture. Duplicate copies of the paperwork and a set of master gauges were kept at Bern. It was up to the manufacturer to build jigs, set up his machinery, and construct as many extra gauges and so forth as were required. These he was quite at liberty to destroy or do with what he chose at the expiration of the contract, *but the original drawings and gauge set supplied by Bern had to be returned.*

As far as gauges and drawings went, then, the Waffenfabrik had two of everything when Mauser came knocking. An agreement was reached, probably in the fall of 1967, and the actual transfer took place around the first of December, 1967, when Mauser sent two trucks down to Bern to fetch the gear back to Oberndorf.

For the not insignificant sum of $60,000 Mauser received the following:

1. One copy of the entire M1929 production package: blueprints, parts drawings, work sheets, tolerance calculations, etc.
2. One of each inspection gauge necessary for reading every dimension of every part in the gun.
3. About 30% of the necessary jigs.
4. All of the blueprints, drawings, and calculations Bern had made in 1960 when redesigning the M1929 for the Swiss gunsmiths.
5. Three pistols: one each of the 1906 German contract model, the Swiss 06-24, and the M1929.

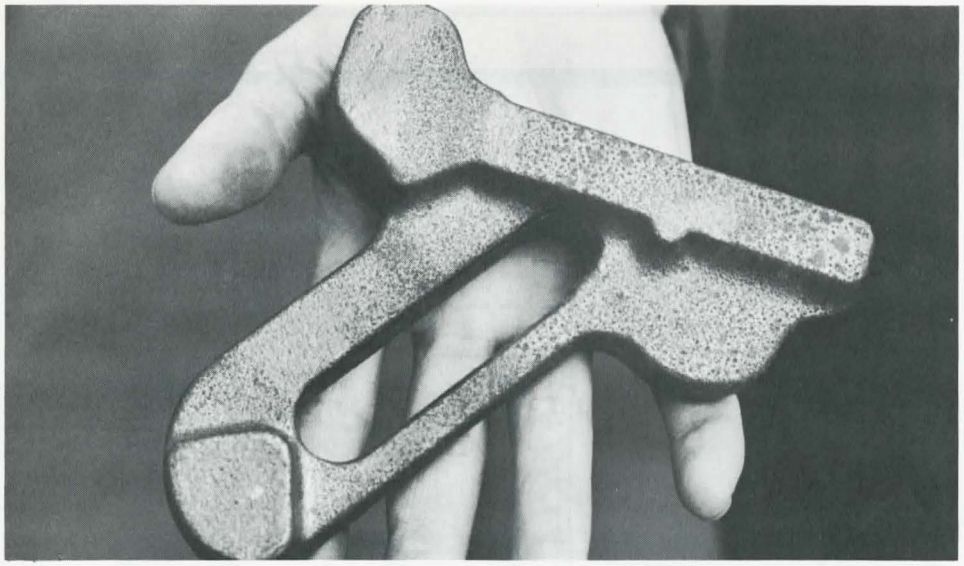
In addition Mauser evidently bought about fifteen Model 1929 pistols on the Swiss commercial market. Bern meanwhile retains a duplicate set of the M1929 blueprings and other paperwork, and the master gauges.

With this acquisition Mauser committed themselves, intellectually and emotionally at least, to produce a Swiss pattern pistol rather than the P-08 Interarms had requested. But the more Mauser engineers studied the Swiss material, the more evident it became that the Bern purchase was not the Godsend they'd hoped for. This for several reasons:

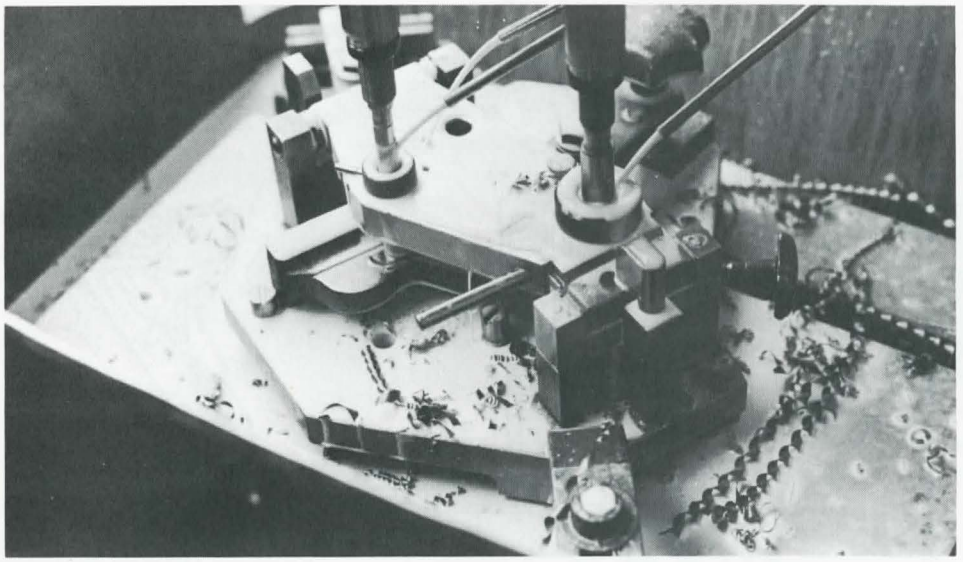
Mauser's engineering and production facilities are set up in accordance with German Industry Standards (DIN). To them the Swiss blueprints seemed all backwards. Where the Swiss read a plus-only tolerance the Germans read a minus-only and so forth. The blueprints would have had to be redone for this reason alone.

A more serious problem was that the jigs, worksheets, etc. were geared to 1930's production methods—indeed, the way Mauser had built the gun in the same era—and a far cry from the way they'd have to do it today.

For instance profilers, reading off a control die, were not used in Switzerland, nor in Germany either until the P-38 went into production at Mauser during the Second War. With the Luger, the work always moved around a static tool, rather than the tool's moving around the work. Every curved surface on the frame then was the arc described by the frame as it pivoted around to meet a cutter of a given radius. The pivot points were the holes drilled for later placement of the safety, the magazine release, the magazine base, the takedown latch, or the trigger guard. Today, of course, these same holes are used to attach the work to the jig, but the jig stays static as the pre-programmed tool moves into the work and does what's to be done. Thus, while the Swiss were able to save time, money and bother by making the frontstrap of the Model 1929 straight rather than curving it out at the bottom, such external contours



New Luger starts life as a 56-1/2 ounce drop forging, subsequently loses 83% of this bulk during 101 machining operations.



After planing to lateral specs, magazine base, mag release, and thumb safety holes are drilled to give jigs a place to grab during later operations.

Mauser let an immediate order for 30,000 frame forgings to the smithy, had some 5,000 of these in work when Stevenson made these photos in late March. Later orders will level off at 1000 a month.

make little difference today—the 1969 tools can describe a curved line quite as quickly and easily as a straight one.

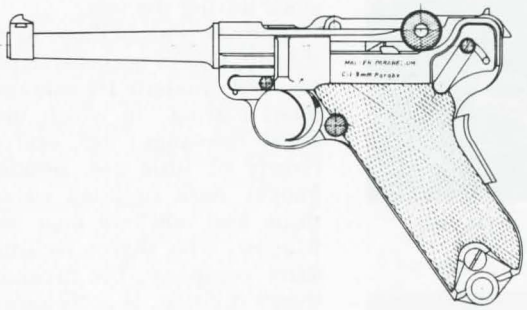
In general modern production methods didn't catch up with the old Parabellum. The only exceptions which come to mind are the grip safety on the 1929 Swiss which was cold stamped, and the frame-mounted rocker piece which engaged the recoil spring guide rod in the P-08. Originally machined from a solid block, this piece was produced from section stock during the war.

The new Parabellum, as we'll discuss shortly, will of necessity depend heavily on such modern techniques as investment casting, in which instances the Swiss drawings, jigs, and gauges are clearly of little use. Besides, the 250 gauges Bern supplied were fairly antique and nowhere near as precise as Mauser, who shares facilities with her sister company, the measuring instruments division, is accustomed to using.

The way it finally worked out, say the Mauser engineers who handled the Swiss artifacts, they had to completely redo the drawings and tolerance calculations to conform to German Industry Standards. The work sheets of course were done up from scratch to follow new production procedures. The jigs, they say, had to be scrapped completely, and the only items salvageable were just a few of the production gauges. This corresponds with what I've seen in the Oberndorf plant.

Either Mauser had ulterior motives for making the purchase in the first place or they took a clobbering on the deal. The Swiss of course came off handsomely. They got their money, they still have duplicate drawings and their original set of master gauges, and Mauser is making a Swiss pattern pistol. Before Oberndorf had the first prototype finished, an order from Bern for spare Parabellum parts to make Swiss shooters happy again was sitting on the desk.

The obvious problem in producing the Parabellum is to avoid going bankrupt paying the guys who run the machines. The old Luger offers worthwhile instruction in this respect, and here it would be prudent to correct the many ill-founded opinions of those who have injudiciously imbibed the data presented on page 305 of Datig's *The Luger Pistol*. According to Datig, to produce a Luger pistol from scratch required a total of 642 machine operations plus 136 hand operations. The machine operations required 78 minutes while the hand operations ate up an hour and twelve minutes. This gives a brand new Luger for 2½ man and machine hours, fast work by anybody's standards; sounds more like the Sten gun. Datig, a fastidious researcher who is usually very careful in labeling



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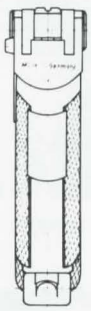

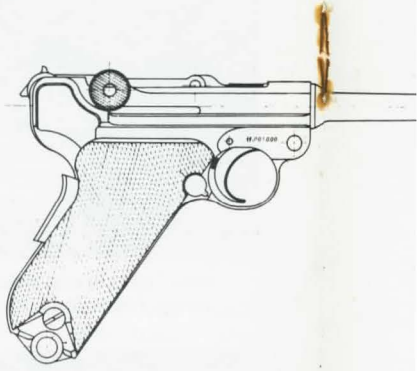

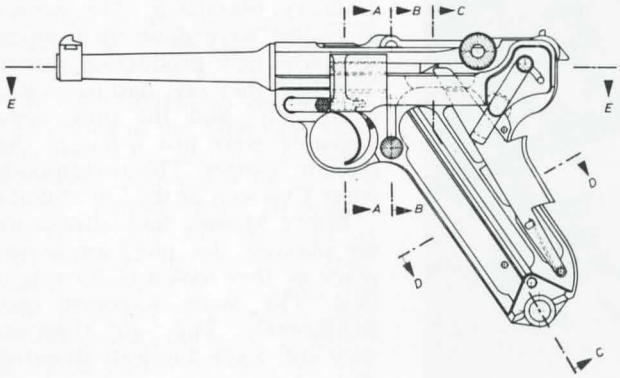

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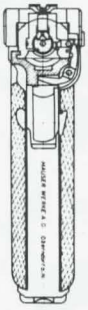

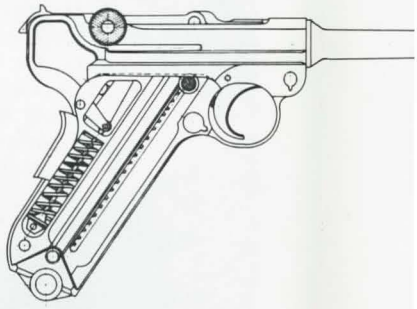

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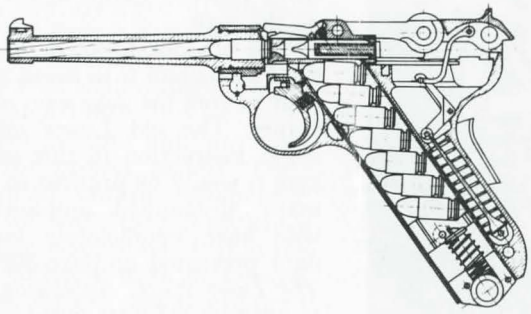

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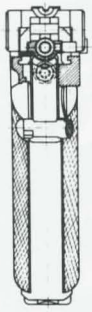

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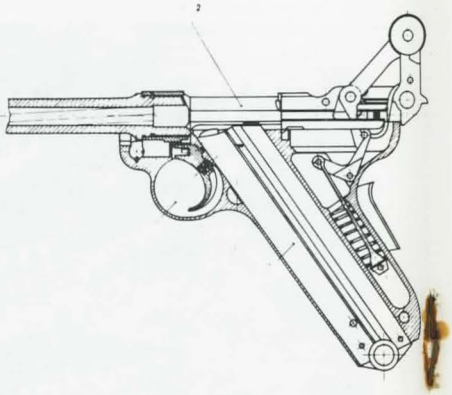
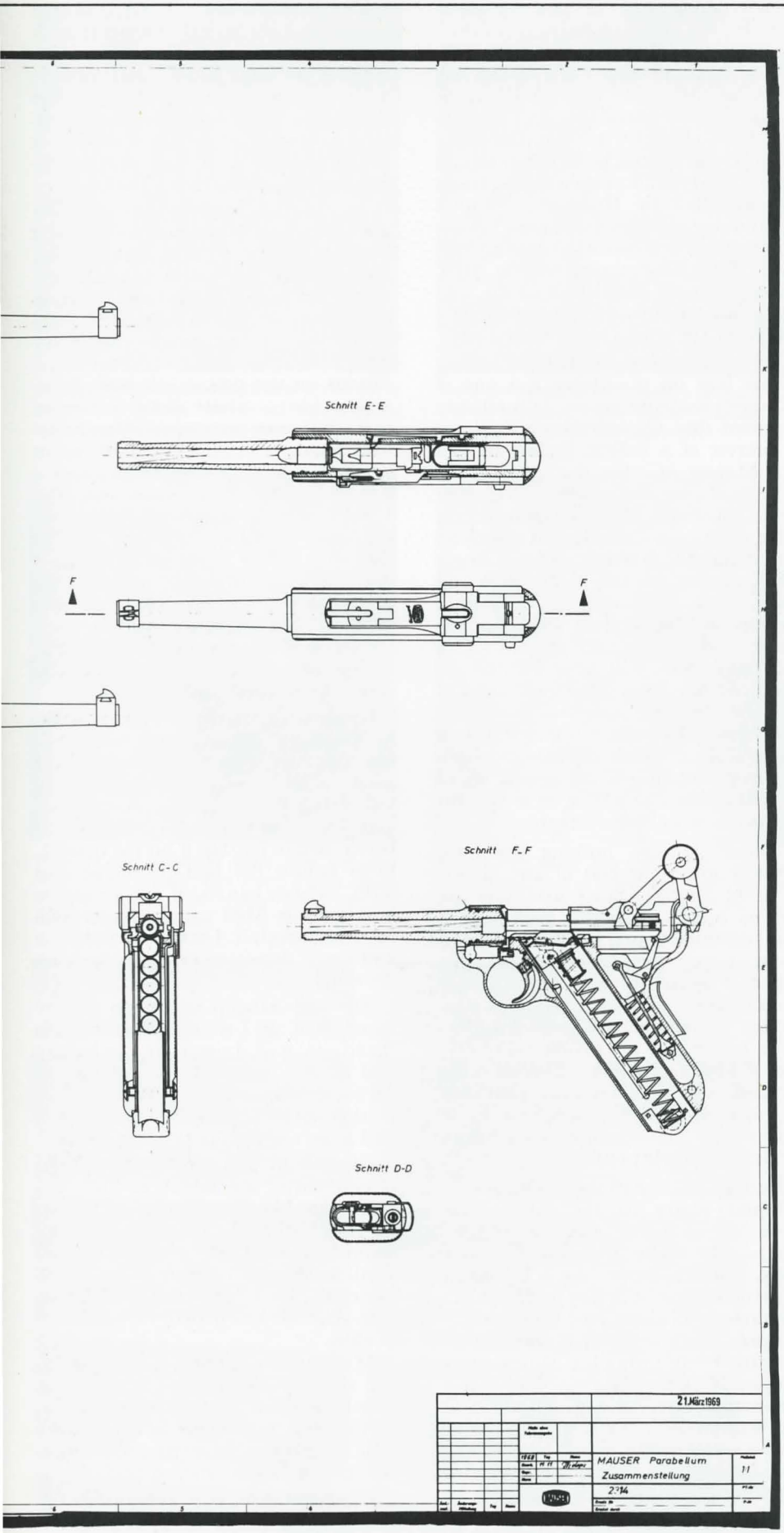




the various shades of truth, credits this information to his old friend, August Weiss. And it was Herr Weiss who clarified things for us:

Datig's figures, Herr Weiss said, refer only to those operations on the P-08 which Mauser paid for on a piece-work basis. Everything paid on an hourly basis was in addition. This enlightenment, besides accounting for a lot of additional hours, can uncover a lot of extra operations as well.

Extrapolating from personal experience, let's look at a Smith & Wesson revolver: In assembling the cylinder and guts to the frame there are perhaps two dozen fitting points where files, stones, or the mallet may have to be used. Smith & Wesson pays for this as piece-work, and considers it as two operations: one man fits and aligns the yoke, while the next man fits the cylinder, the entire action, times the piece, and adjusts the trigger pull along with a plethora of other things. How many actual "hand operations" are involved here? A lot more than the two Smith & Wesson would say they are paying piece-work for! And how many *actual* hand operations lie concealed in the 136 for which Mauser paid piece-work rates in 1939? Many indeed.

For one thing, the P-08 was hand-fitted twice. The first fitting, while the parts were soft, was a veritable field day with hand files. After heat treatment the parts came back for what the Germans called *"schwarz-montage"* or "black fitting," where warpage and distortion had to be corrected.

In addition to concealed operations, the quoted figures did not include the numerous gaugings and inspections, both factory and governmental, which the P-08 and its components underwent in the course of manufacture. Nor does it include proof testing, magazine loading, sighting in, cleaning, greasing, or merely trundling the parts from machine to machine or deburring them when they come out.

Herr Weiss's recollections come much closer to the truth than do official statistics when he says that roughly 650 machine operations and 450 hand operations were required to build the P-08, and that twelve hours of labor went into each gun.

This figure from Herr Weiss's prodigious memory has lately received interesting corroboration, and incidentally speaks well of the efficiency of his foremanship. I recently asked one of the Mauser engineers on the Parabellum project how many man and machine hours, with the modern techniques they were using, would be required to produce each new Luger. He toyed around with a slide rule for a minute, and seemed somewhat shaken

to find that at the outset each gun, it seemed, would be eating about twelve hours of work. This was a rough answer, he explained, and he hoped it wouldn't last long. Indeed it can't last long if Mauser is to survive the experience.

The Luger was always a pig for tooling. Herr Weiss's crew turned out the P-38 comparatively effortlessly with 450 machines. Yet to run Parabellums in any significant quantity at all required a minimum of 750 machines. It was not as a luxury that he brought 800 machines with him when production was transferred from Berlin to Oberndorf in May of 1930.

By modern standards this is a gross excess of tooling. Many were small machines for picayune operations on over-complex parts. Yet Mauser engineers were absolutely correct in deciding that if they were to come out of this Parabellum effort with their shirts, their best move would be to spend lavishly for heavy tooling to cut down on man hours, while application of advanced manufacturing techniques would pare machine time and total number of operations. Anticipating much tighter tolerances than had previously been held, the soft fitting operation was abandoned; the new Luger will be entirely hard fitted. Glancing again at U.S. experience, Smith & Wesson abandoned soft fitting of their revolvers years ago.

Before examining the results of these prudent intentions, it would simplify things to find out where the gun is going to be built. As we've already mentioned, SIG turned Mauser down on an exploratory inquiry for subcontracting the frame or receiver fork or both. Assumedly, Mauser asked elsewhere as well. It was generally expected in Europe that a major portion of the new Luger would be built at Manurhin in France, where the HSc slide and frame are manufactured. And no one would have been surprised if some Parabellum parts had been farmed out to the Heym plant in Munnerstadt as well.

Somewhere along the line, Mauser says, they decided, and wisely so, to keep the Parabellum all in the family. It's quite a family. For the past ¾ century Mauser has been a part of the vast Quandt holdings, along with DWM, IWK, NWM, and some forty or so other companies. To start with, Luger production will be contained within the IWK division of Quandt Group. By 1971, all operations are expected to be transferred to Mauser in Oberndorf.

At the moment, Mauser-AG, the gunmaking outfit, is busily whittling away at the frame and barrel, and will soon go to work on the sideplate, trigger, holdopen device, and the mainspring guide rod as well. Mauser-GmbH, the precision instruments division, is building the receiver fork, while IWK in Karlsruhe is starting work on the toggle links and breechblock. Rifled barrel blanks, measuring 25¾" long by 1" diameter come from NWM (Netherlands Weapons and Munitions) while finished magazines are supplied by Hollandia, another Quandt-owned Dutch company. Other components are sprinkled around various IWK companies, while pins, springs, screws, forgings, castings, and such are prudently subcontracted wherever the work can be done best.

Back to where we left off—going whole hog on machinery was one of Mauser's smartest moves. It is reliably reported that Quandt Group laid out a quarter of a million dollars to tool up Mauser-AG for the components that will be built there. Another $100,000 worth of Parabellum tooling went to Mauser-GmbH, and it took an additional $87,500 in machines to get IWK moving on the toggle links and breechblock. To top it off a final quarter million dollars went for fixtures and gauges, all around. This tots up to $687,500, plus $60,000 on the Bern purchase, plus three years of engineering costs, plus overhead, plus getting a raft of subcontractors off to a cheerful start, which explains why Joe's Custom Gunshop never tooled up to make Lugers, and why a lot of hopeful importers went home unhappy.

Wages, to say nothing new, are what establish the cost of any manufactured product. Since machines are run by men, and highly paid men at that, machine hours, in effect, are man hours in some proportion or other. To expect Mauser to turn out a Luger from forgings and solid blocks of steel by the antiquated methods of a long-gone yesteryear is crassest assininity, and I'd have written them off as rankest fools had they not done what they did so well—that is, prepare the Parabellum for manufacture by the most modern methods possible.

Perhaps the two most unreasonably complex pieces in the entire pistol were the sideplate and the trigger. Mauser is wisely investment casting them both, a move which I heartily applaud. The trigger bar, which, mounted in the sideplate, transfers trigger pressure to the sear, is cast as well, as is the recoil spring leg, which we've previously referred to as the frame-mounted rocker piece which serves as an intermediary between the recoil spring and the recoil spring-breechblock assembly coupling piece. The S-shaped coupling piece itself, which takes a lot of strain, will still be machined from a forging. The safety lever also will be cast, again an excellent application.

The barrel is turned down from rod or bar stock, as are the magazine latch and the takedown latch on a smaller scale. The frame and receiver fork are both machined from forgings, while the toggle links are fabricated from section stock, or profile material as the Germans call it, and the breechblock is machined from a solid bar.

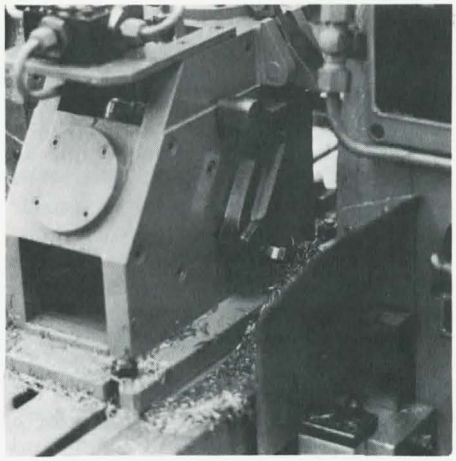
Indeed, the only suspect piece in the entire gun is the sear, which will be made of sintered iron. Sintered iron, the mainstay of powder metallurgy, makes an incredibly hard and amazingly precise part, but is brittle and tends to crumble a bit on corners under heavy wear. There are many excellent applications for this process—indeed, Remington has a whole division devoted to it—but sears are suspect. One American handgun maker got badly burnt when they went overboard on sintered iron parts about five years ago. Sintered iron is dangerous in sears when the sear faces form opposing lips, as they do in most revolvers. The Luger sear is quite different though, and may lend itself admirably to this process. The engagement surfaces on the Parabellum sear and striker are truly expansive, and form broad, flat faces rather than fragile lips.

Being no metallurgist, I am cautiously optomistic about the use of sintered iron for the Luger sear. However, I'd want to see it take 10,000 rounds of test firing before giving it an OK, and I'm sure Mauser will do this or better before putting it on the market. Even before the first prototype was built, Mauser had fitted a sintered sear into a Swiss M29 and had run 2500 rounds through it. I examined this piece and could detect no wear whatever on the notch.

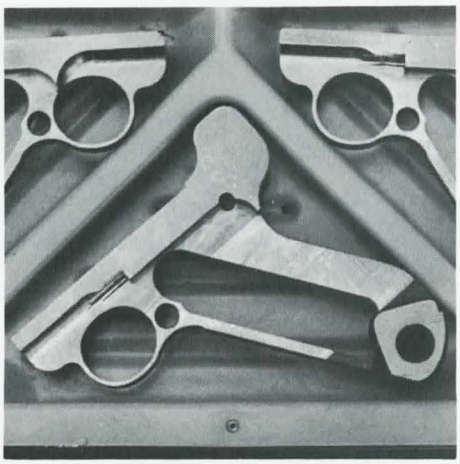
The real hangup to using a powder metal sear, as I see it, has to do with the trigger pull. Lugers are chronically foul in this department, and part of the correction involves bending the sear. A sintered sear simply won't bend, and a file's not going to cut it either.

Given a sintered sear and a bucketful of cast parts, one might wonder, as I did, why Mauser is going to the incredible bother of chiseling a 270 gram frame out of a 1600 gram forging. A small calculation shows 83% of the material, not to mention a few hours, gets whittled and frittered away in the process.

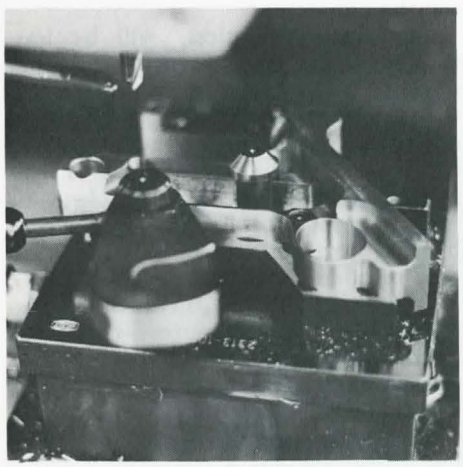
Much verbal rubbish is heard about the superior quality of forged parts, which hearkens back to the comment of Professor Schlesinger in Berlin, who said, regarding the German arms industry in the 1930's, they manufactured chips with guns as an incidental by-product. Some wag in the U.S. picked this up later and applied it, quite accurately, to Colt.



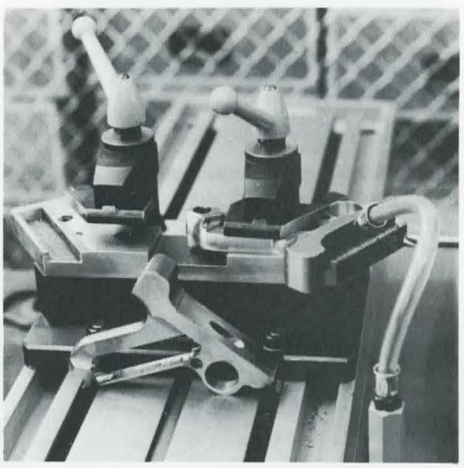
Preprogrammed machine handles 2 frames at once—one on each side—routs trigger guard and magazine recess from side.



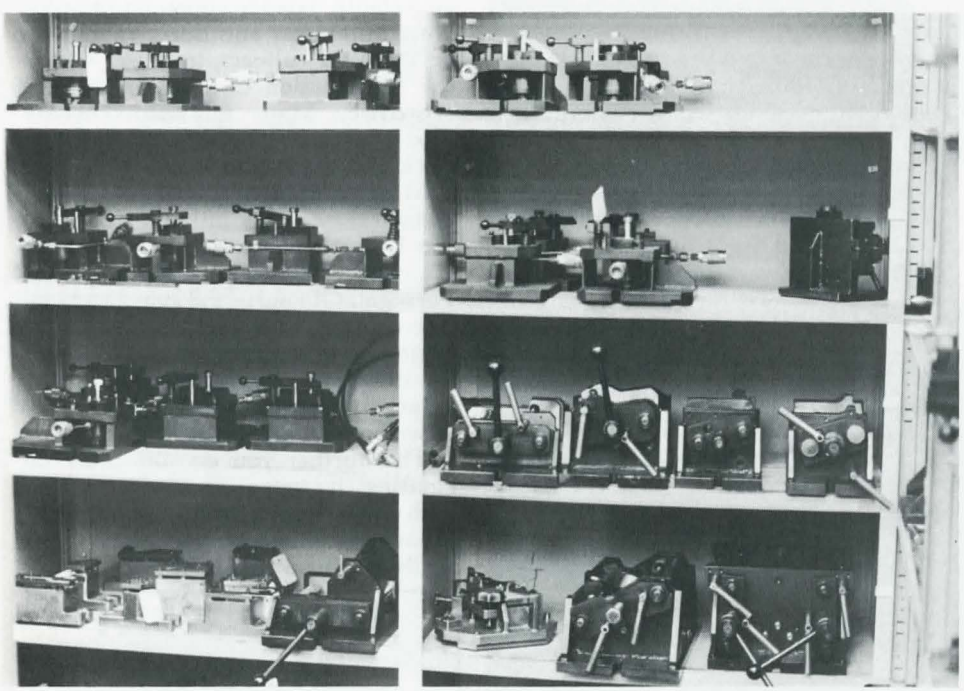
Parts are served at the machine in lunchroom-like partitioned trays. These frames have undergone the first four operations.



With the part locked in place, tool will rout recoil spring recess, then make a pass along the grip straps. Note Mauser crest on left corner of shop-built jig.



Two at once again. This tool will drill magazine well preparatory to broaching, one assumes. This was a far as Mauser had got when Stevenson visited the plant.



A small portion of the quarter-million dollars worth of jigs and fixtures that Mauser built and had built from scratch for the Parabellum. All this just to hold the parts in the machines.

Anyway, Mauser at present is putting exactly 101 machine operations and approximately 25 inspections into each frame. This takes time. It's all well and good to envision running a profiler once or twice around the piece to get the outside contour, but the fact is that the part goes through six operations just to get waste stock off before they can put the profiler on it. Inside machining tells a similar tale. Why not cast it for starters? Tool wear would be slightly greater, perhaps, but total machining operations could be cut by 30% and stock removal would be reduced by 90% or better.

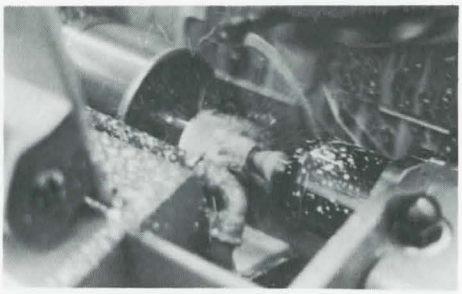
The answer is easily found. In Europe as in the U.S., foundry lag time from receipt of order to delivery of a cast part runs to almost a year while lag time on a forged part is only some three months. As an ancillary reason, Mauser does have more experience in working forgings than castings. But they were also nearly three years behind on their contract with Interarms, and in my opinion took the fast and self-sacrificing alternative. They let an immediate contract for 30,000 frame forgings, with 1,000 per month to follow thereafter, and tooled up to handle them. That's a lot of frames, and inertia has a way of setting in, but although no one will 'fess up to it, I'm still looking for the Luger to come through with an investment cast frame within the next three years.

Without doubt the most charming machine in the plant is a Dubied 517 programmed lathe which sells for something over $16,000 from the plant in Neuchatel, Switzerland. This device profiles the outside of the barrel, performing what was previously six separate operations in less than two minutes, and takes the place of an entire department. Despite this, the Luger barrel, prerifled though it is, still takes thirty operations and ten inspections to bring it to finished form, which gives some hint as to how come the gun costs money.

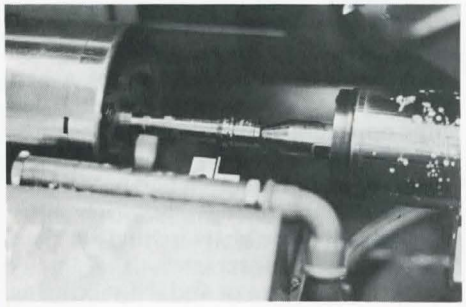
When I was at Mauser 10 days before this writing in March, 1968, some 5,000 frames, by rough estimate, were in work, and were about halfway through the manufacturing process. Barrels were briskly emerging out the back of the Dubied 517 into a bin, but the chambering machine, though uncrated, was not yet in operation. *Messzeug Division* was tooling up for the receiver forks, but hadn't yet started work. Incredible as it still seems, the Luger *is* coming back, and is almost upon us.

Vorgrimler's research department had built two prototypes to check out the blueprints, but these were torn down and in heat treat. If the prototypes perform, a fifty-gun pilot run will be launched immediately, and the

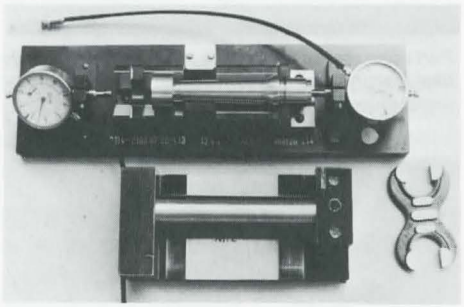
The cunning Dubied 517 is the backbone of the barrel making department; indeed, to date it is the barrel making department, costing a reported $16,000.



In a blizzard of cutting oil, the Dubied does what was formerly six separate operations in the space of a few heartbeats. Without tooling like this, the Luger couldn't be built again.



A second after this picture was taken, the machine spit the barrel out the back into a bin. It does everything but make pictures of itself.



Barrel blanks are gauged before and after going into the Dubied machine. Dial gauge allows +.1mm from barrel flange to breech face, and –.2mm from back of sight base to muzzle. All three gauges are Mauser-built.

schedule calls for 5,000 finished pistols by the end of December. January of 1970 will see Mauser swinging into a production schedule of 1,000 Parabellums a month. This is something shy of the 600 Lugers a day Herr Weiss was turning out from 1938 to 1942, but still is a bit hard to comprehend.

Think back to the tooling-up expenses—747,000 documented dollars Mauser laid out to put the Luger back on the line. Add in the incidentals and it comes to an easy million and a half, just to launch a pilot run. This for an order of 10,000 to 20,000 guns which all sources agree is the requisite minimum to put the Parabellum back in production? Not quite.

Interarms' contract with Mauser calls for the delivery of 100,000 Lugers over a ten-year period—enough to arm every officer, non-com, and enlisted man of the post-Versailles Reichswehr, and some twenty times more than any previous prospective importer has been able to envision selling.

Again, it's a fairly simple matter of economics. Interarms *has* the money, and with a firm order of that magnitude, Mauser can expect to amortize their expenses about halfway along, and start pulling a decent profit, this barring recession and supposing the piece sells to Interarms' rosy expectations.

Mauser, with "100,000" all but painted on the office walls, is letting Interarms have the basic model with 4" barrel for appriximately $80 each, which is some 35% below their and Hebsacker's previously announced estimates of 1967 and 1964 respectively, and some 30% below Waffenfabrik Bern's rock bottom price to the Swiss Gunsmiths for a rough-finished, recheapened Model of 1929. Which goes to show that there's some sort of difference between a 10,000 gun order and a 100,000 gun order. Or else that Swiss purchase wasn't such a lame-brained loser after all.

In order to avoid presiding over the funeral of both firms, Interarms will hold their mark-up to the bare minimum in an effort to make the gun sell to their optimistic expectations. The 4" barrel model will retail in the U.S. for about $160—I earlier would have been surprised to see it as low as $200. The 6" model will go for about $170, and the 8" model with barrel-mounted long range sights will run $180, both reflecting Mauser's mark-up exactly, says Interarms.

As an interesting interjection, it is reported that Mauser was approached in 1959 by a prospective American importer all eager for Lugers. He happened to have gone precociously to the right place, but his order potential probably didn't far exceed four dozen guns. At any rate, it's said that Mauser told him they could supply 100,000 Lugers for $85 each—roughly $5 over Interarms present contract price for the same size order. This has to have been a facetious quote. At the time Mauser wasn't even seriously planning to make sporting guns, much less Parabellums. They had no tooling, no drawings, and no cost study to consult. Either this off-the-hat answer was accurate by accident, or else the people at Oberndorf had it psyched out all along.

Who'll buy 100,000 antique pistols? Save in one or two possible variations, the Parabellum doesn't rate as a serious arm. Luger collectors, as a sales base, are a captive market for Mauser's new playthings. They've no choice but to buy every variation that appears. Where I running the show, I'd exploit them ruthlessly. I'd usher forth every variation that Fred Datig and Harry Jones ever dreamed of, and I'd match Colt's every commemorative issue from the Gadsden Purchase to Hawaiian Statehood. Anything to sell the old lemon!

Interarms, doubtless, will be less vicious. They have a well developed sense of aesthetics, and seem to want the Luger to move at least partially on its own merits, whatever those may be. No artificial commemoratives will be forthcoming, but a number of variations will appear if for no other reason than to get the show back on the path they originally charted.

Mauser's first effort, in the three barrel lengths, will be pure Swiss, save for the milled rather than lathe-turned receiver ring. Interarms from the first wanted the P-08; they wanted the curved frontstrap; they wanted a stock lug; they wanted a magazine safety; they wanted a blue rather than a black finish. These changes, by the nature of things, will come through piecemeal, and each alteration will be collectable, fated to appreciate in value. Nine millimeter and thirty-caliber will be the lead calibers, but 1971 will see the introduction of a necked-down 22 centerfire. Mate this with the 16" model with the detachable and legal stock and it starts to look interesting.

Most interesting of all, Interarms claims they have military orders for the Luger, and not in Latin America. If pressed for a guess, I would hazard Portugal. Of course the sideplate won't interchange with current Portuguese Lugers, and the Portuguese are hurting for sideplates. But since the sideplate is now investment cast, you can just as well make one as the other.

The further you go, the more fascinating it gets. That's how it is with the Luger, and finally, after decades of diligent effort, and for no really practical reason at all, it's back.

MORE NEXT MONTH! DON'T MISS IT!

The Parabellum Story

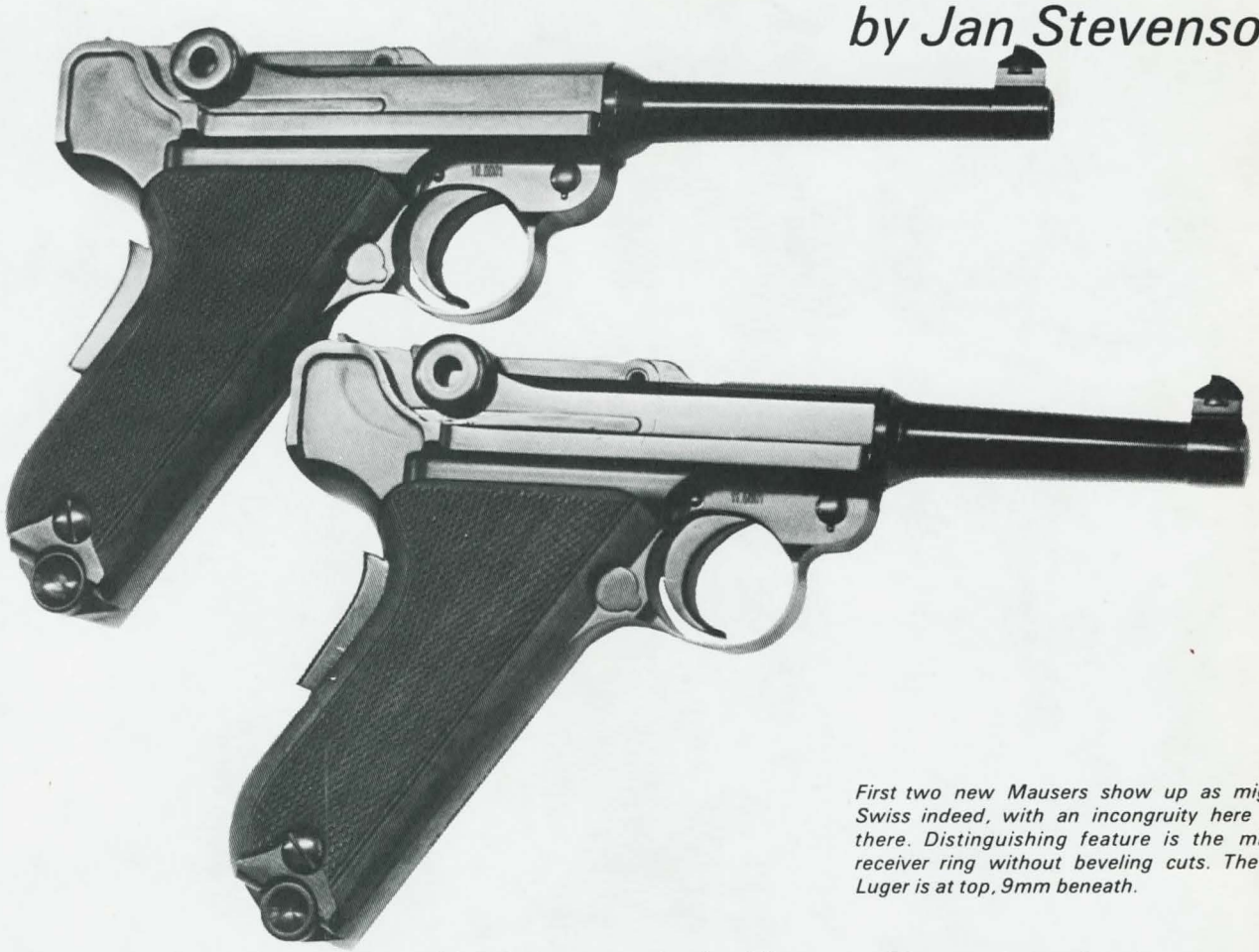
This is a 1942 Commercial Luger (note Mauser banner on toggle) and as such is out of Mauser's last commercial production, some 27 years ago.

This is Part IV of Gunfacts' exclusive series on the Mauser Parabellum pistol, a post-World War II rebirth of the P. 08 or Luger, a gun they said would never be made again.

PART FOUR

THE PARABELLUM STORY

by Jan Stevenson



First two new Mausers show up as mighty Swiss indeed, with an incongruity here and there. Distinguishing feature is the milled receiver ring without beveling cuts. The 30 Luger is at top, 9mm beneath.

With the knowledge that Mauser ad acquired, in December of 1967, all f the drawings and calculations that Vaffenfabrik Bern had made in 1960 hen drastically redesigning the Model 929 pistol for possible remanufacture, ıe overriding question became, "To hat extent would these alterations ap- ear in the new Mauser Parabellum?". ccuracy, reliability, design correctness -all the points one usually ponders in sting a new gun—were of small inter- st, for the Parabellum is as old-hat as oone's coonskin. We wanted to know ainly if parts from the new pistol could e fitted as replacements in older guns, ıd whether Mauser's new offering ould be cheapened according to the ern prescription.

The chance to answer these ques- ons came in April, 1969, as the first vo toolroom-built prototypes were mpleted by Chief Engineer Vorgrim- r's development department at Mau- r's new facilities in Schramberg- ılgen, about 10 miles west of Obern- orf.

To the first question, "Yes". The ew Mauser internally duplicates the Swiss M1929 almost exactly, thus Mauser will stand as a ready parts source for older Lugers. Sideplates of course will interchange only with the Swiss '29, and as previously noted, barrels and receiver forks will require extensive gunsmithing to swap. Other parts *should* interchange with normal hand fitting.

To the second question, "No". Bern had envisaged replacing all solid pins in the gun with hollow split pins, a la Winchester. They would substitute simplified two-piece parts for some of the single-piece machinists' horrors in the old Luger, and face-lift whatever was left. So far as I could determine, without the Swiss drawings in front of me, none of these changes show up in the new prototypes. Like Mauser says, the new pistol is a fair carbon of the Swiss 1929, and the 1929 itself was but little changed from the DWM '06. The reworked Swiss demonstration pieces which Mauser made up for the 1969 NSGA and NRA shows then gave an honest notion of what would be forthcoming.

The most interesting change concerns the machining of the receiver ring. The Swiss, as we've noted previously, latheturned it. This was cheap and easy, but it sacrificed a bit of frame engagement railing, left unsightly gaps at the prow, and the shoulder this operation created made stamping crests, coats of arms, and so forth on the receiver ring impossible.

The Germans had originally worked this part with two concave milling cutters. The first tool went in over the receiver ring, cutting the top contour until it came out about 2/3 of the way back, just ahead of where the toggle knobs would seat. A second, smaller tool was run in over the cut made by the first, but only for about half the length of the receiver ring. This produced the elegant bevels on either side of the ring, characteristic of all Lugers except for the 1929 Swiss.

The new Mauser prototypes dispense with the bevels, leaving the receiver looking like an aircraft hanger or a flat-walled Quonset hut. It's still an aesthetic improvement over the Swiss pistol, but we could wish for the more expensive tastes of older days.

Mauser probably figures they're well advised scrimping anywhere possible on the receiver fork, for it's a dog to build. It starts as a 555-gram (19 1/2 oz.) drop forging, losing in the course of 50 machining operations, over 75% of its original weight. The 51st cut, in Mauser's view, was the back breaker. Worksheets on the receiver fork call for no less than 45 inspections during manufacture. When I was at the plant in the spring, Mauser GmbH had two milling machines doing the first operations on some 550 receivers which were stacked nearby.

Another bit of redesign involves the barrel shank. In 1929 the Swiss discovered they could get much more accurate barrel-receiver alignment by leaving an unthreaded portion on the barrel shank just behind the flange to mate a matching surface in the receiver ring. The Germans had reached similar conclusions with the P-08. According to P-08 blueprints, the threading runs right up to the alignment surface, which was fine for the take-it-easy tooling of decades past. Mauser engineers, though, figured they'd be breaking a lot of cutters on their high-speed threaders if they tried to rip the tool out through that much stock at the end of threading. Thus they lathed in a 1mm groove to separate the threaded portion of the shank from the alignment surface. This enables the threading cutter to be disengaged in the air, so to speak, and also leaves the alignment surface standing free where it's much more convenient for grinding to precise diameter.

Exactly what problems all this will create for the gunsmith who wants to put a new barrel on an old receiver, I'm not sure, but it's something he'll have to worry about along with the fact that the new barrel shank, made to Swiss measurements, is 21mm long, while that on most 1906's, and all 1902 and P-08 pistols, measures but 18.85mm.

At the time of our last visit to Oberndorf, Mauser had two Luger prototypes ready, a 9mm numbered 11.0001, and a 7.65mm numbered 10.0001. We grabbed both for firing hours before they were scheduled to go in the deep freeze for sub-zero testing—a small portion of the arduous test program Mauser has mapped out before the gun goes into full production. Curious regime for an antique like this, but Mauser's going to anyway, probably because they anticipate military orders for the old warhorse.

There was loud reluctance on Mauser's part to let Gunfacts shoot these pistols—the same routine one gets from most manufacturers where prototypes are concerned, and indeed quite logical. The function of a prototype is to verify

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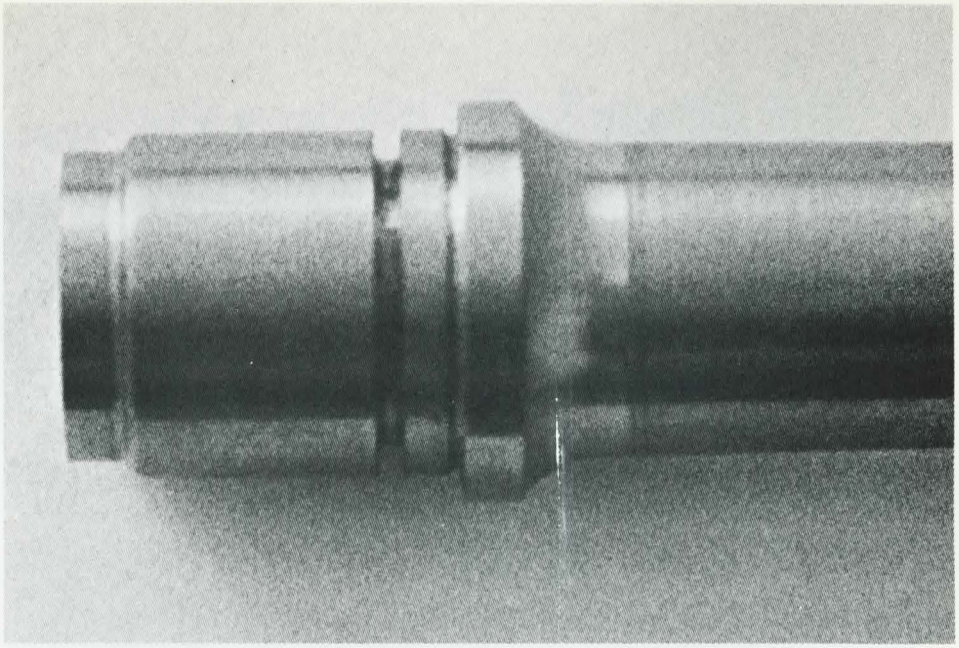
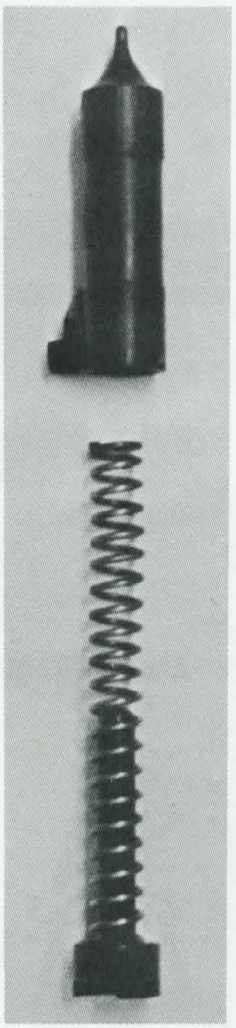
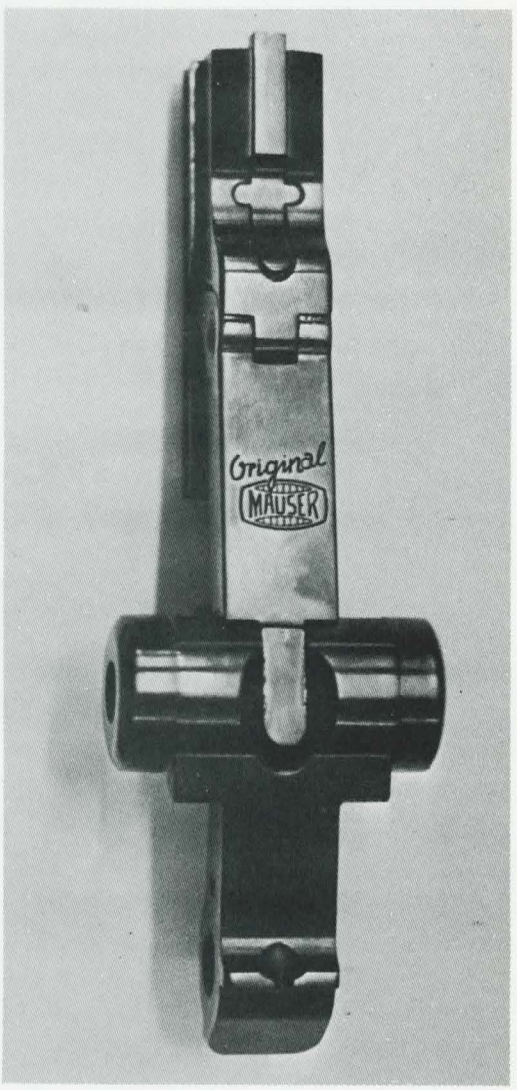
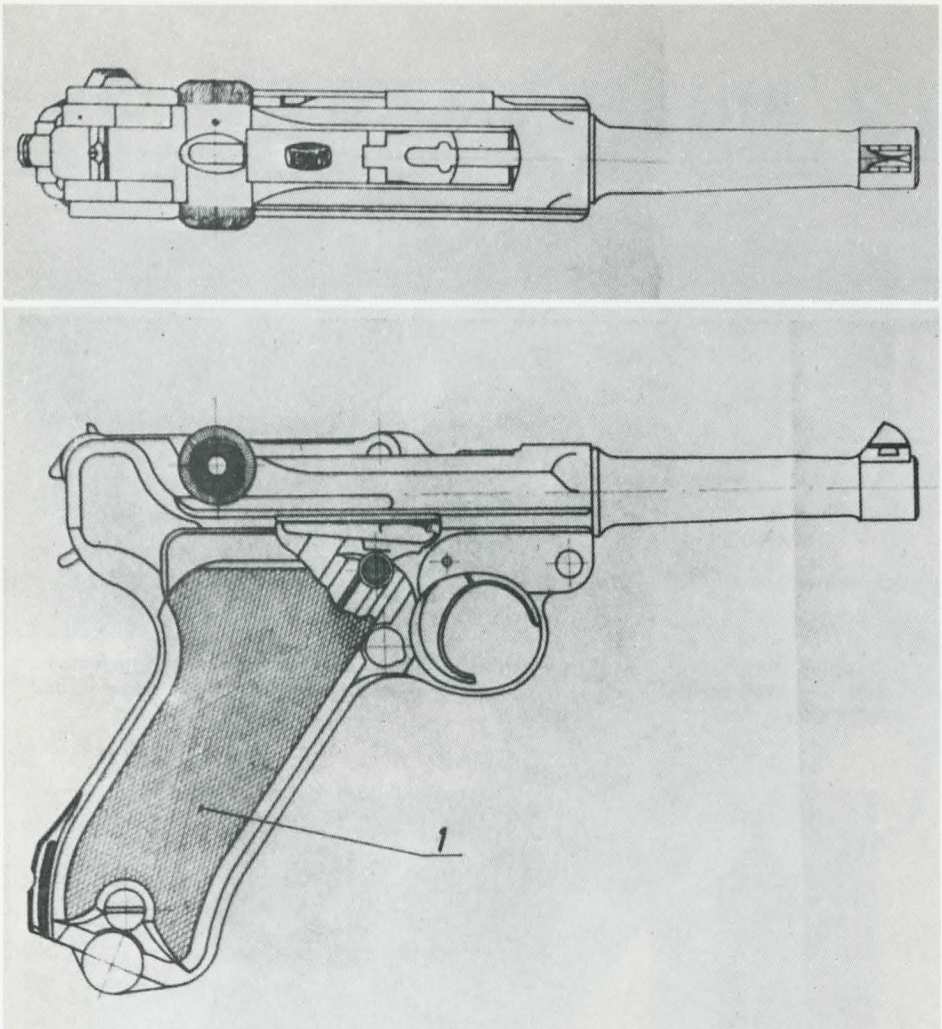


Brand new barrel shank shows 1mm lathed groove separating free-standing alignment surface and main portion of shank which will later be threaded. P-08 ran threading up to alignment surface.



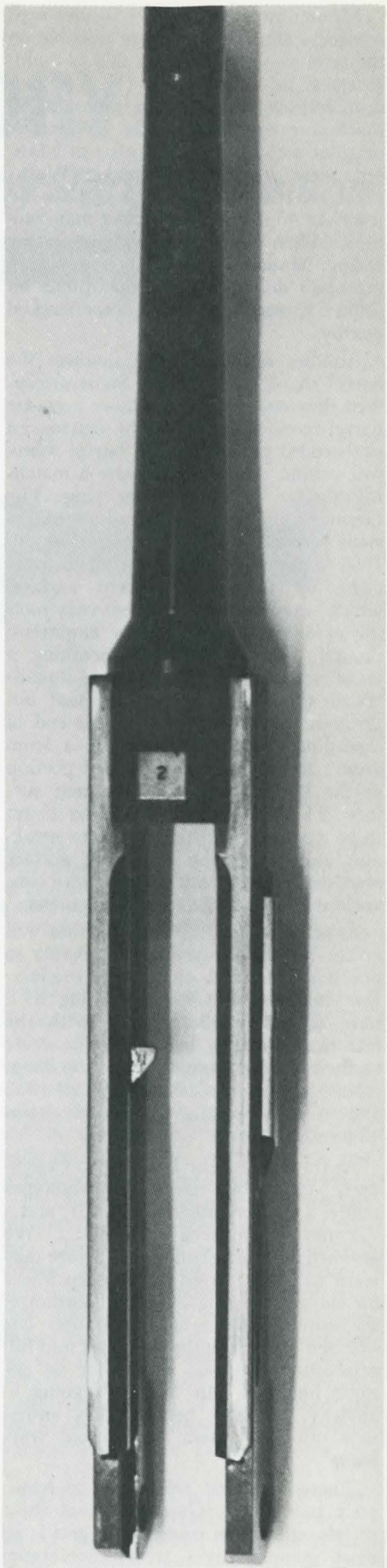


Breechlock, toggle linkage, and components recall the good old days.

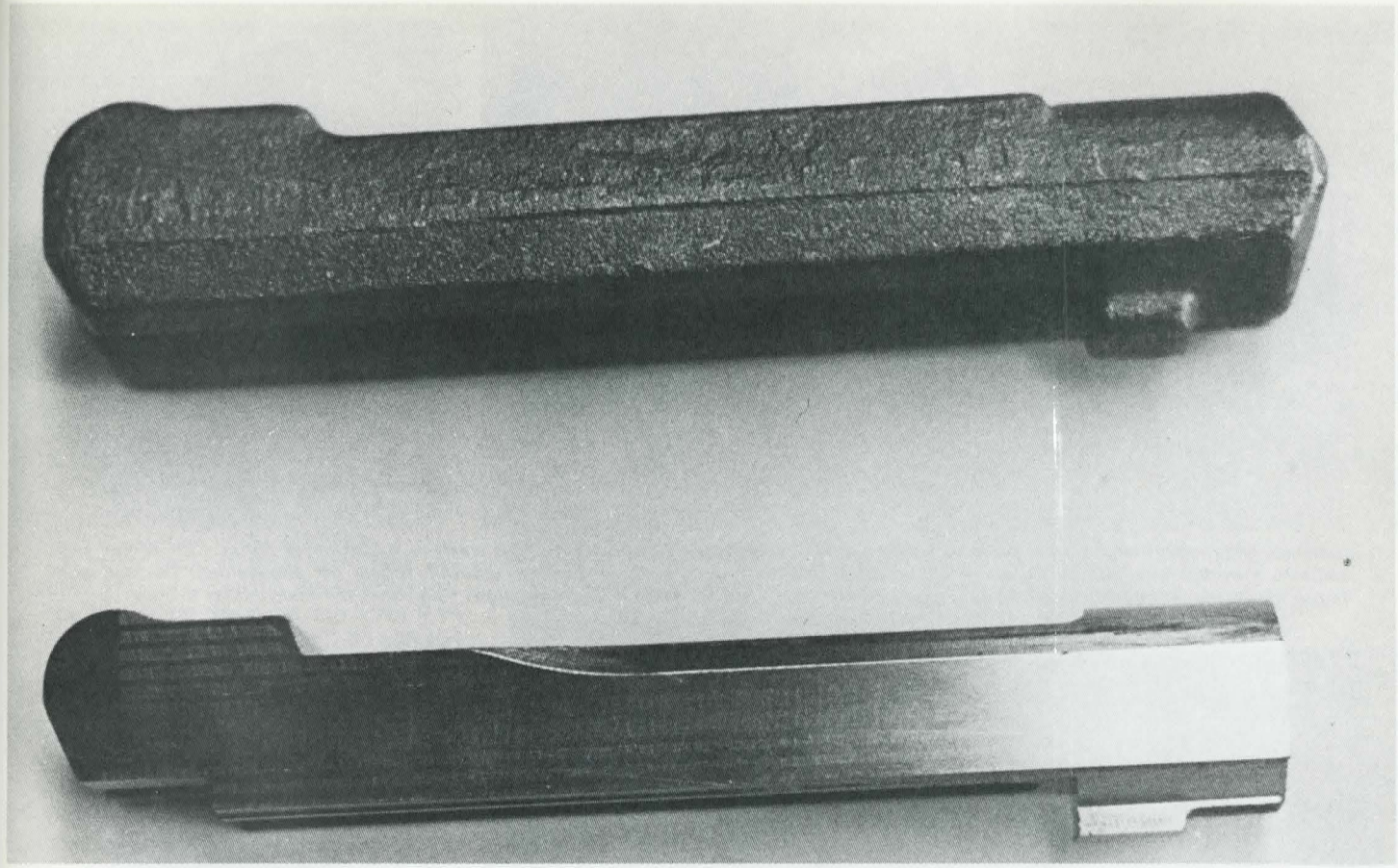


Features shown in this 1938 Mauser drawing of the P.08 are what Interarms wants in the new Parabellum, but first production runs won't have them all.

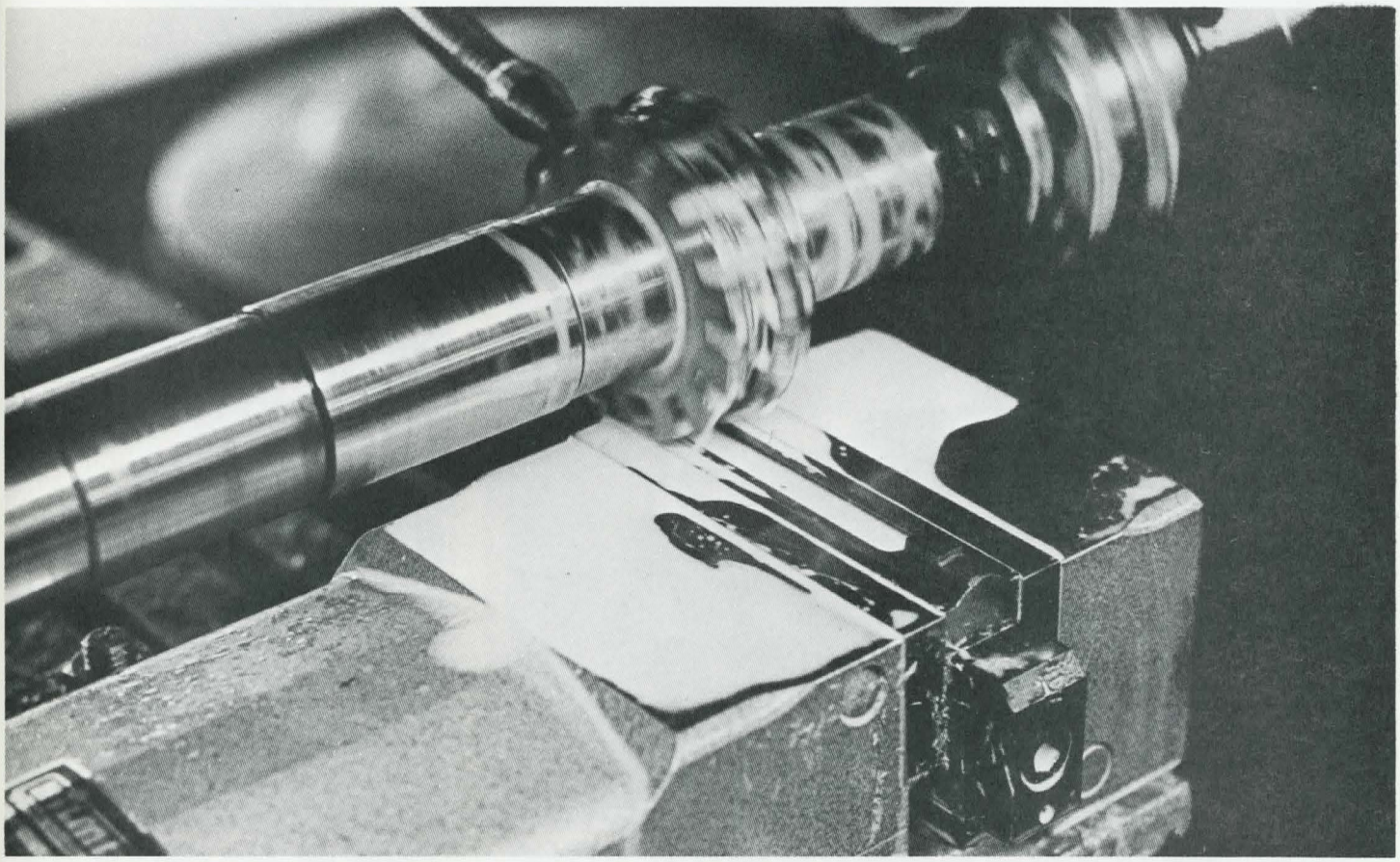
Mauser's first prototype is this 4" 9mm with the snafu inscription, ".38 Luger".



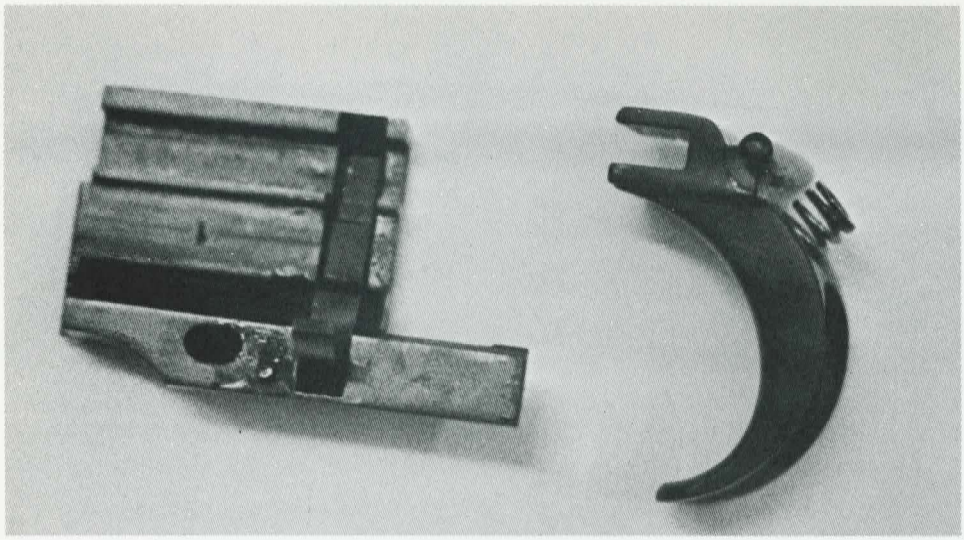
Square receiver lug was a trademark of the Swiss 1929. This one, workstamped "2", is on Mauser's 7.65 #1 prototype.



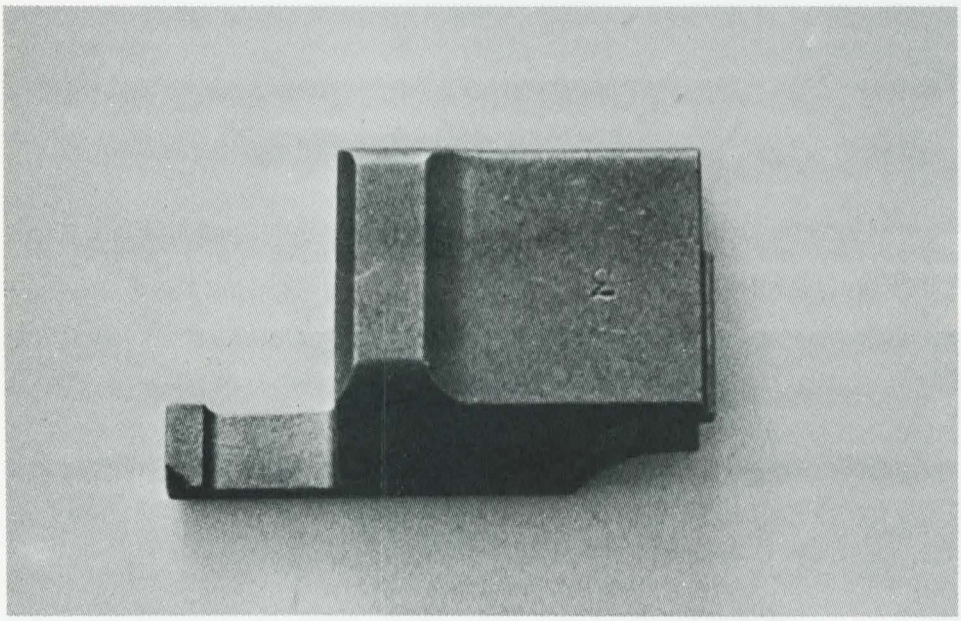
Receiver fork starts off as a 19-1/2-0z. drop forging; loses over 75% of its bulk in work. Semi-finished mate shows how far work had progressed when Stevenson visited the plant late in April.



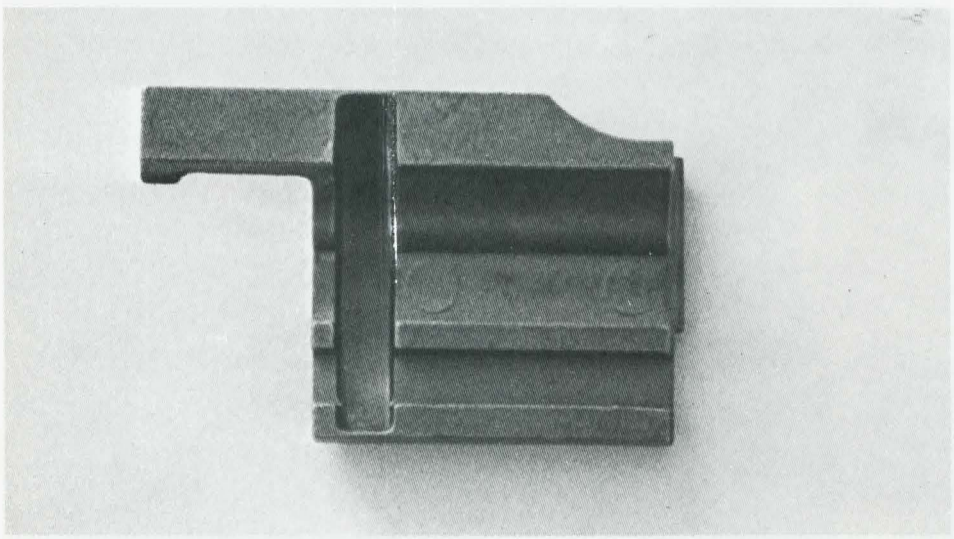
Receiver fork is built in Mauser's measuring tools division. Fifty operations (mostly milling) and 45 inspections bring it to finished form. Here it takes first milling cut on underside.



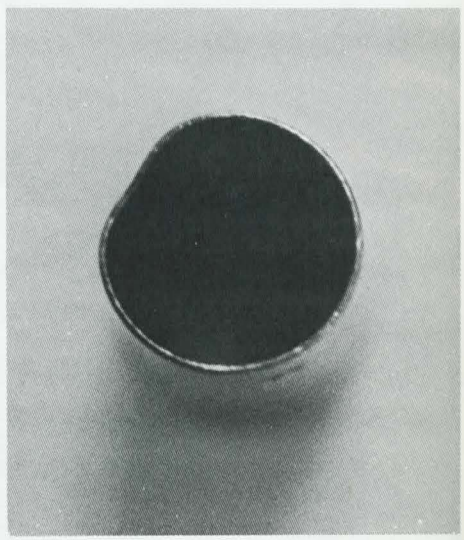
Sideplate and trigger from #1 9mm prototype shows how it looks when it comes out of the wash — it looks pure Swiss. Cast trigger will still take a worthy bit of machining to bring it to shape. Mounting pin diameter must be reduced, trigger bar engagement slot cut, and trigger spring mounting hole drilled. Then we polish, blue, and hand fit, not to count inspections. The Luger still costs money to build.



4-o'clock ejector imprint shows clearly on soft Geco brass. Case mouth is fated to be bashed in on the opposite side.



New Luger sideplate is investment cast, will interchange only with the rare 1929 Swiss; could just as well have been P-08 pattern. This is how it looks when it drops from the mold, before machining and polishing.



Flat-sided case mouth shows it hit the left receiver wall during ejection. With luck it will clear the port on the first bounce.

the blueprints. Some engineering calculations are bound to be off; the gun is expected to malfunction and such things will be corrected before production commences. Thus prototypes can be fairly criticized only on matters of general design—quite superfluous, of course, in the case of the Luger/Parabellum.

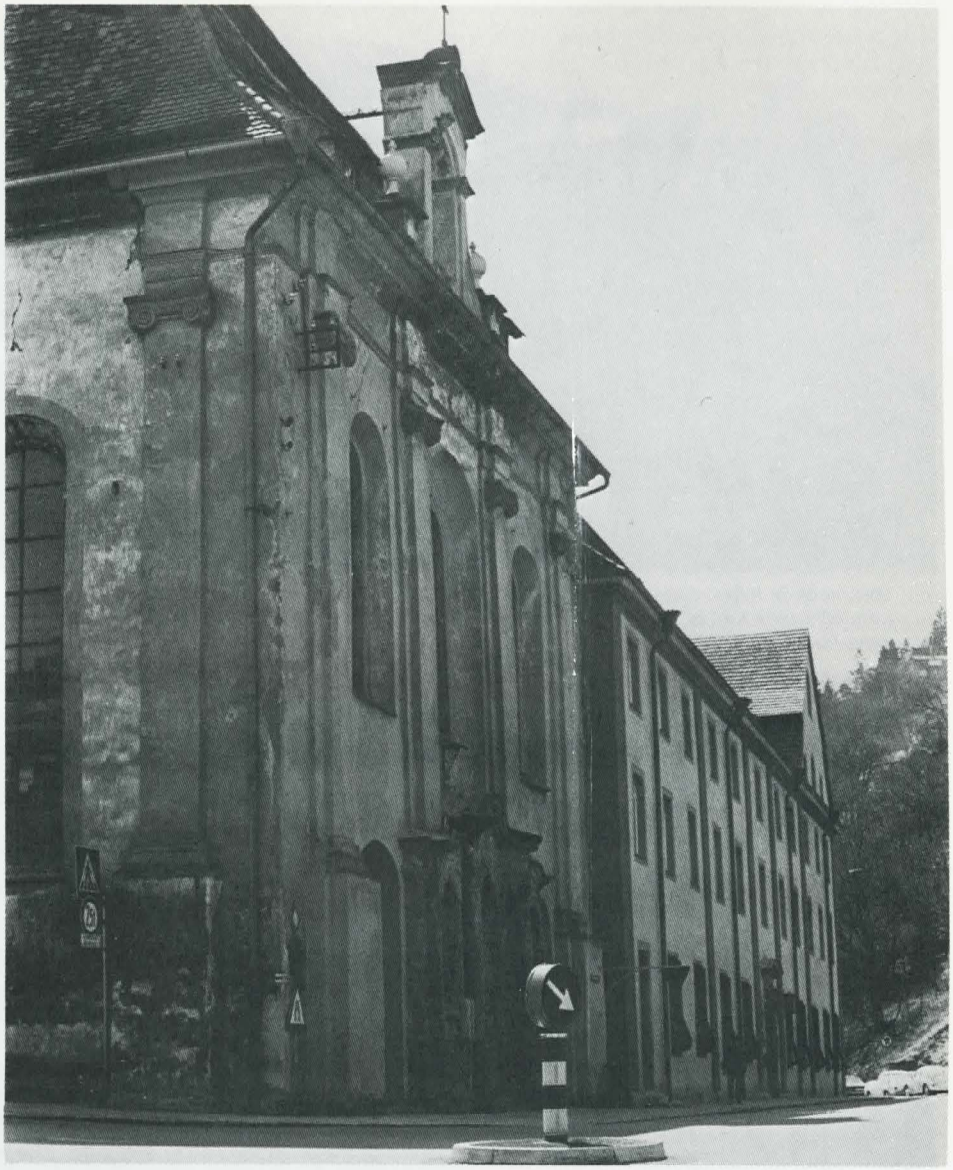
Malfunction they did. The 9mm gave 8 jams in 40 shots—all of them identical. The gun was feeding a bit high, and the round would snag on the top of the chamber. The engineers noted this, and doubtless production will see the feed lips lowered slightly, chamber mouth chamfer deepened, or such. Ejection was faultless, and there were no other hitches. The 7.65 went through 15 rounds without a bobble, at which point our trigger finger gave out.

A sweet pull, someone must have decided, was small virtue on a prototype. The trigger on the 9mm ran from 9 to 10 pounds and creepy. The 7.65 was too heavy to creep, weighing at 11 to 11-1/2 pounds. Either I was having an off day, or the triggers were too much to hack. My best group with the 9 was a 5-shot donut measuring 1 3/4", benched at 25 meters without elbow support. Average group size for all 40 shots, fliers included, was 3 1/4". Disregarding 4 fliers, the average for a 5-shot group shrunk to 2 1/2". This, while not perfectly disgraceful, was nowhere near as tight as it should have been.

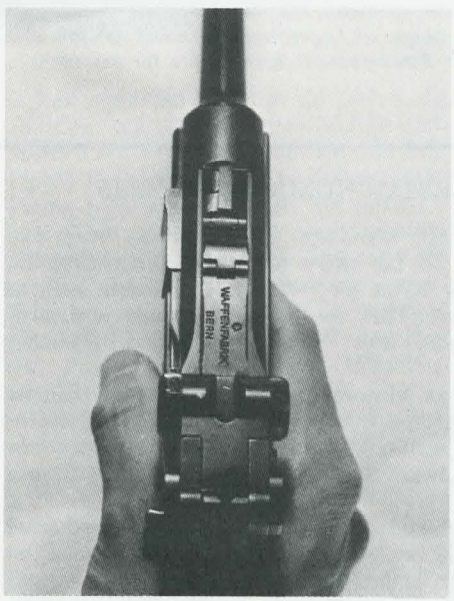
The 7.65 looked like a better shooter, but by the time I got to it my aching digit had already pressed some 400 pounds of gritty Parabellum trigger. The first 8 pounds went on fine, but the final 3-3 1/2 pounds of pressure would have the front sight vibrating in the notch. When I had to use two fingers on the trigger to get the last string off, I quit. Granted my condition, the 30-cal was giving interesting groups. The first target found three shots in 3/4", with the other two, close together, 2 1/2" below them. The next group was virtually identical. I gave up after the 3rd group, a 5" vertical string. Ammo was West German Geco in the 9, Remington in the 7.65.

Given a decent trigger, I think these guns would shoot. And Mauser says that production pistols will have as good a pull as the design permits, which is sometimes good. To fit the sintered sear, they've ordered diamond files (models 2112, 2122, and 2132) from Winter in Hamburg. These go for from $5 to $7 each and work like princes, Mauser foremen say, while standard files slide right off.

A visual examination of the two prototypes showed up some interesting details. The stocks were of the 06/24 Swiss pattern, flat sided with only the flats checkered, leaving maybe a 1/2"



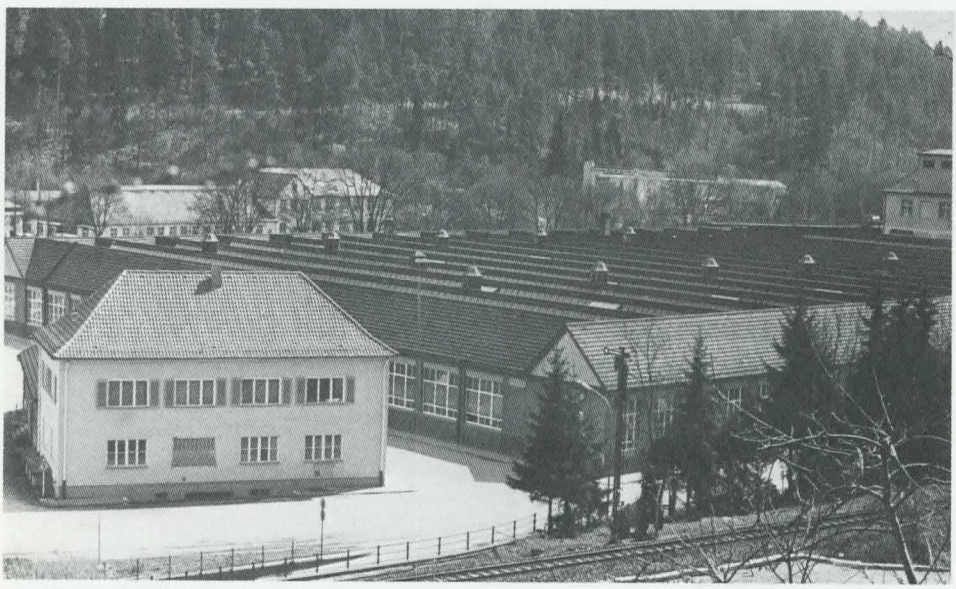
Mauser's administrative offices are still in Oberndorf's crumbling Augustine Closter, as they have been for the past 3/4 century.



The Parabellum coming will share features of this 1929 Swiss Luger and those of P.08 and 1906 models.

Despite prosperity, depression, and disaster, Mauser's front door has hardly changed at all.

This much is left today of the Schweden-bau, where all Mauser handguns were made from about the turn of the century on. The fitting room was at attic level, with production departments on the first 3 floors.



Mauser's D-bau survived the postwar dynamite binge. All Luger production will be moved here by 1971, and parts will be trucked to the Schramberg-Sulgen facility for assembly and test firing.

MAUSER'S PARABELLUM SERIAL NUMBER SYSTEMS

All numbers start with a caliber prefix. "10" stands for 7.65, "11" is 9mm, and "12" will be the centerfire 22 caliber. So far there are three distinct series. Whether Mauser intends to launch a new series for forthcoming models such as the 8" and 16"-barreled guns is not known. They could, or they could just carry through with the production series as it stands now. Military orders will probably be numbered in separate series.

SERIES 1— Swiss M1929 pistols rebuilt as Mauser display pieces. Identified by a double-0 after the caliber prefix, numbered from 10. Thus, beginning with the first gun of the series: 10.00.10, 10.00.11, and so forth. Still foggy as to exactly how many were made; probably less than a dozen and probably no 9mm's.

SERIES 2— Mauser prototypes. 2 finished and 3 more in work. Numbered from 0001. Thus: 10.0001, 10.0002, etc., and 11.0001, 11.0002 etc. Pilot run will probably carry through in this series.

SERIES 3— Production pistols; numbered from 1000. Thus: 10.1000, 10.1001, 10.1002, etc. and 11.1000, 11.1001, 11.1002, etc.

border to slope down and meet the straps. This aesthetic *faux pas,* says Mauser, results from their decision to use pressed checkering with positive (point upward) diamonds. They have to have a reasonably flat surface against which to press, hence the slab shape with the wide borders. They would have preferred, they said, to use hand checkering and run it all the way to the straps as on the P-08, but costs for this sort of work were out of reason. No reactions were forthcoming when I pointed out that the P-08 stocks had been machine-checkered, and they could do it that way.

(Curiously, the stocks on both guns had been inletted for the long Swiss 1929 grip safety, and then filled in with plastic wood to match the length of the new Mauser safety.)

The 9mm with its fat, stubby 4" barrel brought to mind the 1902 Model. It was a nice looking gun. The barrel was almost untapered, and a tight radius cut brought it down from flange diameter. The left side of the frame was stamped "9mm Para od. .38 Luger," reflecting an innocent Germanic faith in Anglo-Saxon logic. Since we translate 7.65 to 30 Luger, they figured that being reasonable folks, we must give the 9 the same treatment. By now they've discovered we don't, so maybe this amusing inscription will die aborning. Meanwhile the noble 9 has briefly acquired a new name—in Germany. ("od." is short for "oder," which means "or" in German).

The 7.65 sported a 4 3/4" tube—strange since 4 and 6 inches are supposed to be the forthcoming lengths. I would have suspected that they had pirated a pipe from a Swiss pistol, but this barrel plainly seemed toolroom built. It came down from flange diameter in a straight, abrupt taper, which was thoroughly unsightly, and we hope that later guns will show a radius here. *(Editorial Note: Late Swiss replacement barrels do resemble the barrel Stevenson describes.)*

Neither gun had been proof marked, and the absence of superfluous stamps was pleasing. The polish was nice, and the bluing was adequately rich. All told, these were handsome guns, very close to elegant, and the first of a hundred thousand or more to come.

The Luger is finally back, and like an old friend we welcome it and forgive its faults. Or most of them anyway.

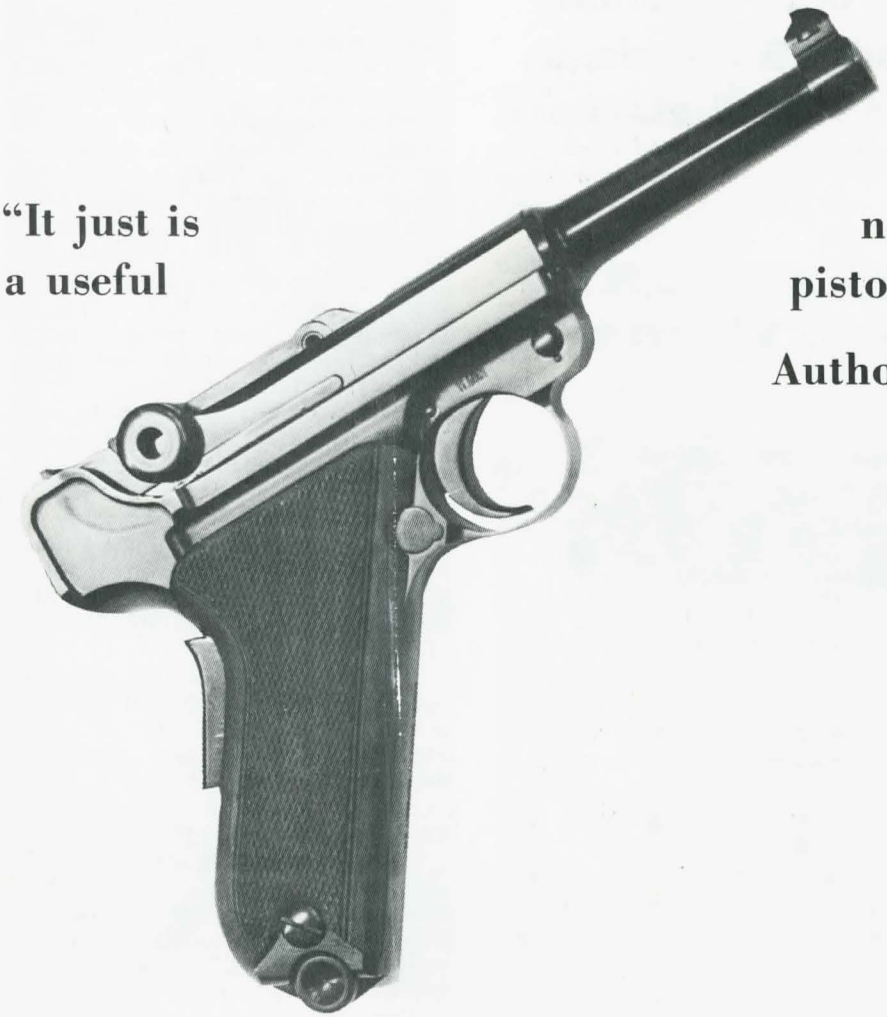
ADDITIONAL COVERAGE NEXT ISSUE

PART V: THE PARABELLUM STORY

A PRACTICAL LOOK AT THE PARABELLUM

The Parabellum was in continuous production, barring brief and unavoidable interludes, for 42 years. In that time some 2½ million were built, mostly on military order. The gun slugged it out through two World Wars and countless minor ones. It has been used in some official capacity or other, we are told, by roughly 40 different governments. It is still in service in Switzerland, Portugal, and numerous more remote jurisdictions, and has always been a favorite of Swiss target shooters. Today the Luger is going into production once again, this to our astonishment. Even more surprising, military orders are said to be already on hand.

With a past and a future like this, the Luger would seem some sort of super-gun. In fact, it got by on nothing but sex appeal. Today it's hopelessly outdated, strength being its sole virtue, and on this there's no monopoly. In any practical application, the Luger loses when compared to other designs.



"It just is not a useful pistol"

Author

by Jan Stevenson

The slim, naked barrel throws the balance point right into the hand exactly where it doesn't belong. To correct this, a bull tube must be custom mounted–an expensive move, and one which destroys the beauty of the gun and ups the weight objectionably as well. Since the barrel is a recoiling unit, there are limits to how much tonnage can be mounted forward before proper functioning is impaired.

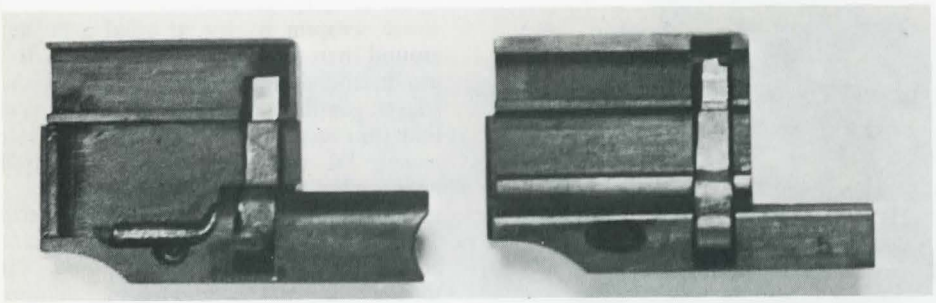
The expansive sear-striker engagement surfaces, absolutely vital to safe operation, mean that a crisp trigger pull is impossible. The best that can be hoped for is a fairly smooth European type mush pull, and this is dreadfully hard to achieve. Trigger pressure has four corners to negotiate before reaching the striker–a record approached only by the Browning Hi-Power–and adjusting the pull is a specialist's job. Most gunsmiths prudently refuse to go beyond fiddling with the trigger spring. Doing it right requires special jigs to bend the trigger lever and the sear. With Mauser now using a powdered metal sear, adjustments on this part will be nearly impossible. Even when tuned to the limit, it is *despite* the Luger trigger that Swiss target shooters do good work with the gun.

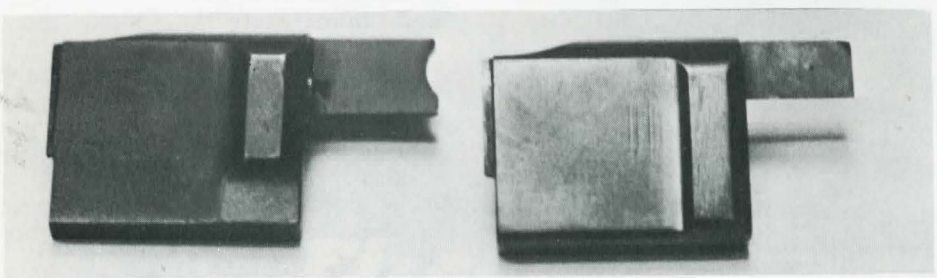
In various *official* tests–notably the U.S. Pistol Trials of 1907–the Luger, though no match for Colt-Browning efforts, has shown itself to be surprisingly reliable. Strange then that I've never found one which could be counted on to get through a box of ammo without a malfunction. A look at the Luger design shows it's inherently jam prone both going and coming.

The barrel-receiver unit recoils 3/8" before the toggle joint is broken upwards by the toggle knobs striking ramp faces on the frame. At the rearmost limits of recoil the feed-ramp portion of the chamber mates with its lower half, which is milled into the frame. This happy union, unfortunately, lasts for but a fleeting instant. As soon as the recoil spring begins to return the breech block assembly to battery, the same spring flings the barrel-receiver unit forward again. The cartridge then must literally chase the chamber for almost half an inch. Sometimes it doesn't catch up. (With guns of Browning design, the barrel doesn't begin to return forward until the fresh round is fully chambered.)

"Stovepiping" occurs when a cartridge case is caught sideways in the ejection port when the bolt or slide returns forward. Many pistols will stovepipe an empty which didn't eject, but the Luger is the only handgun I know of which chronically stovepipes loaded rounds during the feeding phase. In addition to the cartridge-chasing-chamber problem, the sharply canted Luger magazine probably does its share to contribute to the Parabellum's feeding doldrums.

Weaknesses, both for production and in use, led to modifications all through Parabellum history. Above, it took a toggle lock and frame hook to hold the delicate beast closed in early models. To keep trash out of the trigger linkagge, the Germans made the intricate sideplate at left below; this cost the Swiss too much, so they sliced straight across (at right). The latter plate is the one to be on the new Parabellum. Eventually, the Germans couldn't stand the gaff, dumped the Luger and went for the P-38 (bottom), a much better combat pistol.





Walther's P-38 was a vast improvement over the Parabellum, and could be built twice as fast. But even after its adoption, Hermann Goering insisted on Lugers for the Luftwaffe.

As the 1907 test panel unambiguously noted, the Luger's recoil spring is nearly relaxed by the time the breechblock is 3/4 way forward. The rest of the distance is covered mostly on inertia, which means that when other pistols would have slammed on shut, the Luger will jam partly open while trying to seat a round in a dirty chamber, or when trying to force a dented cartridge into any sort of chamber.

If the gun feeds, ejection is the next problem. The idea here is to fling a 3/8" diameter cartridge case out through a 4/8" ejection port. At best then there is 1/16" clearance on each side of the departing hull. This would be OK had Georg Luger managed not to foul things up.

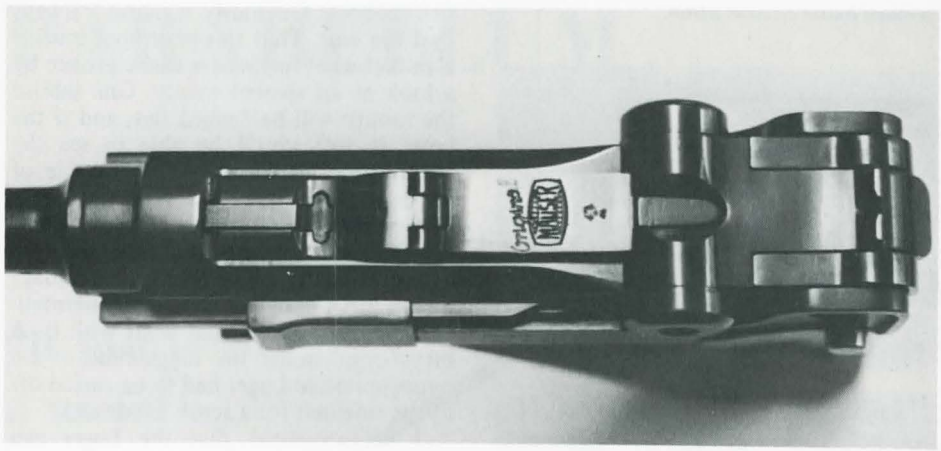
The ejection port and the extractor are at 12 o'clock, which means the ejector belongs at 6 o'clock. We find it, however, at 4 o'clock. The case then is flung as much leftwards as upwards, and of necessity smashes into the left wall of the receiver. With luck, like a billiard ball, it will make it out the overtight ejection port on the first bounce. Obviously it doesn't always find the exit. That this poolroom routine is in fact what happens is easily proven by a look at an ejected empty. One side of the mouth will be bashed flat, and if the brass is soft you'll be able to see the ejector imprint on the opposite side of the case on the base.

Unsanitary circumstances never suited the fastidious Parabellum, and the gun's extreme susceptibility to incident garbage dictated the design of the almost hermetically sealed holsters that went with it. A bit of mud under the toggles meant the hypochondriac Luger had to be carted off to the sidelines for a scrub down.

I often marvel that the Luger can sometimes make it through a full clip without a jam. Obviously, given a preference, this would be about the last gun I'd choose to carry anywhere I thought my life would be in danger. There's more.

The most important part of the mechanism, the sear, lies along the outside of the receiver and is fully exposed for half its length. This is a hell of a daft place to put such a critical part. The Germans, in an effort to keep trash out of the trigger mechanism, went to extreme pains fitting the sideplate to the frame, and in partitioning off each of its devious internal crannies with meticulously machined levees. This was too rich a route for the Swiss, who ran cuts all the way across the piece, leaving in the process new entryways for mud and dirt to get into the mechanism. Mauser, it seems, will offer this feature on their new gun. A cunning aspect of the outside mounted sear is that it permits a chambered round to be fired even when the receiver is disassembled from the frame. All one has to do is to grasp the

Still, the sex appeal that carried the Luger and now will doubtless carry the Mauser Parabellum on to more glory is quite evident in these photos of a reworked M1929 Swiss Luger, which was quite the crudest basic model. It's too slim forward to holster in any usefully rapid fashion, it doesn't like dirt, it doesn't feed and eject unless everything is just right, it's muzzle-light—the list of negatives is long, but it sure is pretty. It never would have gone back into production except that economic factors changed radically.



receiver amidships, and there she blows—the sear is automatically depressed.

The German army, which viewed casualties in terms of depleting a regiment, never took much notice of this, but it caused German police sufficient embarrassment that Mauser is reported to have fitted 150-300,000 pistols for police use between the wars with an automatic sear safety which obviated this sort of accident. This laudable device will not appear on the new Parabellum.

The original Parabellum had to be rendered unsafe before the breech could be opened, creating a moment of danger while both hands struggled with the mechanism. Georg Luger soon took care of this by simply running the safety cut-out in the sear forward another 3/8". The safety then never had to be disengaged except for firing. The Swiss never got around to making this elementary alteration, and Mauser seems to have forgotten the old lessons. We may be thankful though that the Swiss did pass the grip safety on to Oberndorf. The thumb lever of the P-08, no matter which direction it worked, was awkwardness incarnate to disengage.

As a carry gun, there's never been a worse weapon to try to build a holster around than the Luger. It's hopelessly top heavy, and there's nothing ahead of the trigger guard for the leather to grip save that thin reed of a barrel. Were I a holster maker, I'd turn customers who dared mention the gun away at the door.

The highly touted, sharply angled grip creates another problem. A concealment holster which cants the gun forward as it should will pitch the grip beyond the flex limits of the wrist, making a comfortable and moderately expeditious draw virtually impossible.

Indeed, the only options which look remotely interesting from a practical, shooter's point of view are the high velocity 22 models which will hopefully be forthcoming within two years. Out of the 8"-barreled pistol or the 16"-barreled takedown carbine, this will be fascinating item.

Otherwise, we're left with a gun that's ill balanced, jam prone, hypersensitive to dirt, unsafe in certain respects, virtually impossible to holster properly, with an exposed mechanism, and with a poor trigger pull which can't be corrected. On top of this, the Parabellum is the second most expensive service type pistol, price from factory, in the world, and is pushing SIG's SP47/8 hard for first place. At least when you pay the SIG price you get some highly worthwile and extremely practical features in return. With the Luger you get an academically interesting piece of machinery, and a handful of history—rather ancient history at that.

For many, that will suffice admirably, but I simply had to put this opinion in the record.