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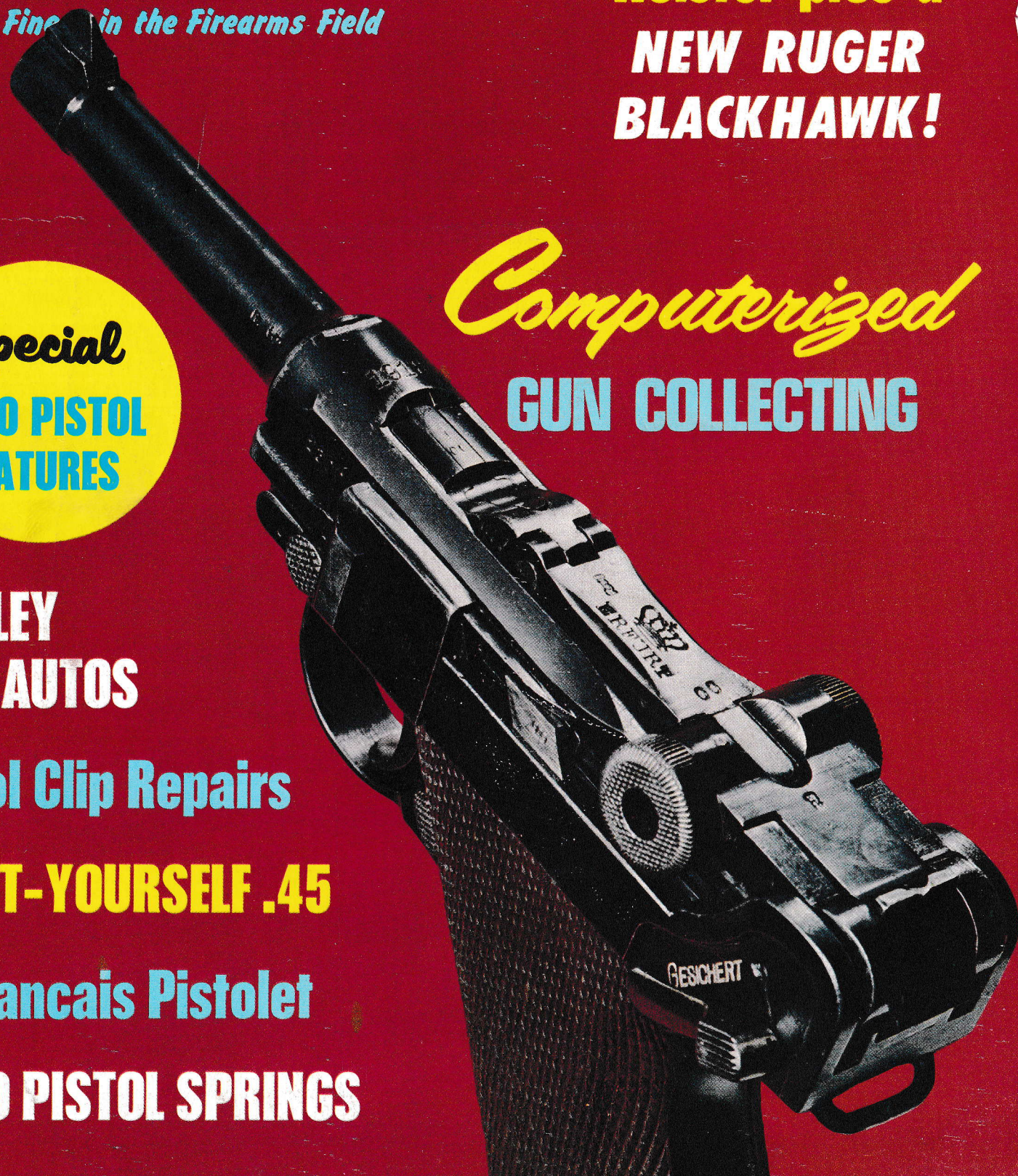
WEBLEY
.455 AUTOS

Pistol Clip Repairs

DO-IT-YOURSELF .45

Le Francais Pistolet

AUTO PISTOL SPRINGS





JUNE, 1973

Vol. XIX, No. 3-6

George E. von Rosen
Publisher

Guns

FINEST IN THE FIREARMS FIELD

DURING a three month period in 1972, more than 12½ million dollars were distributed to the states for use in wildlife management, land acquisition and research. This money went for programs that will help save wildlife; yet it did not come from any "Save Our Wildlife" organization. This money will buy land that can be used by everyone; yet it did not come from any outdoor recreation group. This money will help provide protection for animals that could become endangered species; yet it did not come from Cleveland Amory and his followers or from Alice Harrington and her friends of creatures bag. **THIS 12½ MILLION DOLLARS COMES FROM GUN OWNERS, HUNTERS AND SHOOTERS!** Why don't each of these organizations which propert to be friends of wildlife put their money where their mouth is?

Every time you or I buy a gun or a box of shells, we contribute to conservation. Every time one of these wild-eyed nincompoops open their mouth, they contribute to nothing—except perhaps verbal pollution.

As long as there are men and women with guns, wildlife in America has a chance for survival, for without funds they will not survive. The ducks and geese and deer and antelope cannot survive on words, only deeds—deeds backed by money. If Alice and Amory and all the other loudmouths suddenly disappeared, all of America's wildlife would continue to flourish. If all of America's hunters and shooters should some day disappear, wildlife populations would shrink and eventually they too would disappear. This I believe.

* * *

Jack Mabley, an editor of "Chicago Today," and a strong advocate of anti-gun laws, recently made a plea for all wives of police officers to support gun control measures in the Illinois Senate, saying "the life you save could be your husband's." Well, he got a barrage to mail—mostly disagreeing with his stand, including a letter from the Chicago Police Wives Assoc. which said, in part: "... these bills would only apply to honest citizens who register their guns. Perhaps a better solution would be to enforce the present gun laws."

THE COVER

Still one of the favorite military handguns, the Luger graces the cover of this special auto pistol issue of GUNS Magazine. Photo by Howard Wayne.

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WHAT ABOUT GUN

By E. DIXON LARSON

GUN COLLECTING has been a very exciting hobby for many during the past decade. Many have become so fascinated by the process of gun collecting that they have abandoned their daily pursuits of endeavor and chosen it as a full avocation, to be enjoyed until their demise. Facts indicate that others have become so disenchanted over artificially induced high prices they have given up collecting entirely. Others have felt the Titles IV and VII of the Omnibus Crime Control and Safe Streets Act of 1968 (Public Law 90-351) of June 19, 1968 and the Gun Control Act of 1968 (Public Law 90-168 of October 22, 1968), have placed new and bothersome restrictions on the hobby of gun collecting. Other people, not understanding the regulations, and reading of those who became involved with the Department of the Treasury to severe extents, have become so apprehensive as to eliminate their frustrations by selling their entire collections or letting them remain at status quo. It is a tragedy to see some of the world's finest collections of historic arms sold for this reason. Others learn of the personal abuse to reputable citizens by *law enforcement groups*, who through their lack of communication, or ignorance, have inflicted serious injury, both physical and financial, to innocent victims.

The Kenyon-Ballew incident has resulted in discouraging many would-be collectors. However, attendance at well-established gun shows has remained about the same. A survey of the participants shows that 80% of the displayers and dealers have been engaged in the gun collecting field for over 20 years, 10% under 15 years, and the remaining 10% under five years. Thus it is obvious that new enthusiastic collectors are in the minor-



ity. New dealers comprise over 60% of the participants in the under 20-year period. Dealers, then, are being replaced faster and in much greater numbers than the collectors. In the past 10 years, some very fine collections and their owners have disappeared from the scene for reasons of death, ill health, or loss of desire to aggressively pursue the challenge of collecting or contend with its complicated regulations.

As the number of dealers has increased, an almost unified effort seems to exist in attempting to promote high prices. Observations, correlated with dealers' general sales, indicate many are actively exchanging their wares with each other, perhaps with a custom sale in mind in an effort to stimulate buying.

Many of the dealers have not become aware that the "John Doe's" are not doing most of the buying. Some seem to think it is a status symbol to display exotic pieces at unrealistic

prices, almost in defiance to any thoughts of a serious buyer. Some feel that inflation has to also encompass the collecting field and therefore prices must go up, regardless of demand, which of course is discouraging to new collectors.

Faking and the manufacture of reproductions have definitely affected many groups of antique arms. Tiffany grips, for example, have recently been introduced. Although newly made, they still affect the desire of the collector to pay 30 times their value just to have an original piece. Granted, there are exceptions, but they too have become reticent to invest in costly originals. Suspicion has become a collector's watch word. For years, a pristine engraved gun was a highly coveted arm. Now some, like myself, prefer an engraved arm with seasoned honest use. Arms in excellent condition seem to change caretakers now and then, mainly between the 20-plus-year collectors.

COLLECTING TODAY?

What then can the new enthusiast collect? Is it too late or costly to even begin a collection? These are the questions most frequently asked by those who would like a gauge for the future. There are probably as many opinions as there are arms to collect. What kind of an opinion can be considered?

In today's world of technology and modern expression, computer analysis has become the mechanical authority on many subjects. Most realize that its memory circuits and banks of information are only as reliable as the material programmed into them by the human master. However, most respect the tremendous evaluations that can be made from the computer with an almost endless memory.

It is recognized that there are many patterns of arms collecting and all of them are challenging and satisfying. For example, one can collect European arms, long guns of any and all types, Civil War arms, Saturday night specials, but such arms of various manufacturers do not lend themselves for mechanical analysis. In order to adequately program a study, which is a horrendous task, comparative amounts and volumes of statistics must be available. Therefore, the most widely known American manufactured handguns and rifles were summarized and programmed into a Control Data Corp. Model 6500 computer. These were Colt, Remington, and Smith & Wesson handguns and Winchester and Marlin rifles. All models evaluated were considered antiques in accordance with 1968 gun legislation, consequently, manufactured prior to 1898. All arms were considered as N. R. A. "Good" and equal in condition: Traces of original finish, all original parts, completely legible markings, and mechanically operative. In such cases as the 89 potential Colt Models, from the first Paterson Colt to the Model

of 1892, first swing-out cylinder, certain specific variations were recognized, such as trigger guard sizes, markings, conversions, etc., that could be considered a model in itself. Remingtons and Smith & Wessons are not plagued with such varieties in addresses, material changes in trigger guards, or unusual assembly modifications. In the case of the Smith & Wessons, all were cartridge arms inasmuch as they never manufactured a percussion model, whereas E. Remington & Sons produced 16 percussion models out of a total of 50 including cartridge and conversion models. Thus, considering total representative pre-1898 arms of the five major manufacturers, there are 89 Colt Models, 50 Remingtons, 20 Smith & Wessons, 50 Winchesters, and 19 Marlins that make up the collectable models prior to 1898 date of manufacture. One can readily see, there are almost twice as many Colts to collect as Remingtons; twice as many Remingtons as Smith & Wessons, and twice as many Winchesters as Marlins.

By a value analysis, the Colt Models will represent, upon relative completion of a collection, at today's values, an investment of \$50,000. The Remingtons will barely exceed \$7,000

and the Smith & Wessons, under \$7,500. Winchesters will slightly exceed \$13,000 as compared to under \$3,000 for the Marlins.

Consequently, the average collector can see where his budget will permit him to invest and the probable range of expenditure involved. Thus, the modest investor can own 50 average Remingtons for the price of 20 Smith & Wessons; or a complete Colt collection at slightly over 1/3 the number of Remingtons, but requiring seven times the investment; or double the number of Marlins than in a Winchester collection, but requiring over four times the investment. Remington handguns appear to be increasing in value at a rate greater than at any time in the previous 10 years and proportionately greater than the Colt Models. Percentage wise, they probably will continue to escalate in value and demand, which the trends forecast. This is also true of the Smith & Wessons and Marlins. Winchester promoters have tried to force prices up on certain models; but the sales and demand figures indicate some values were not realistic to the buyer.

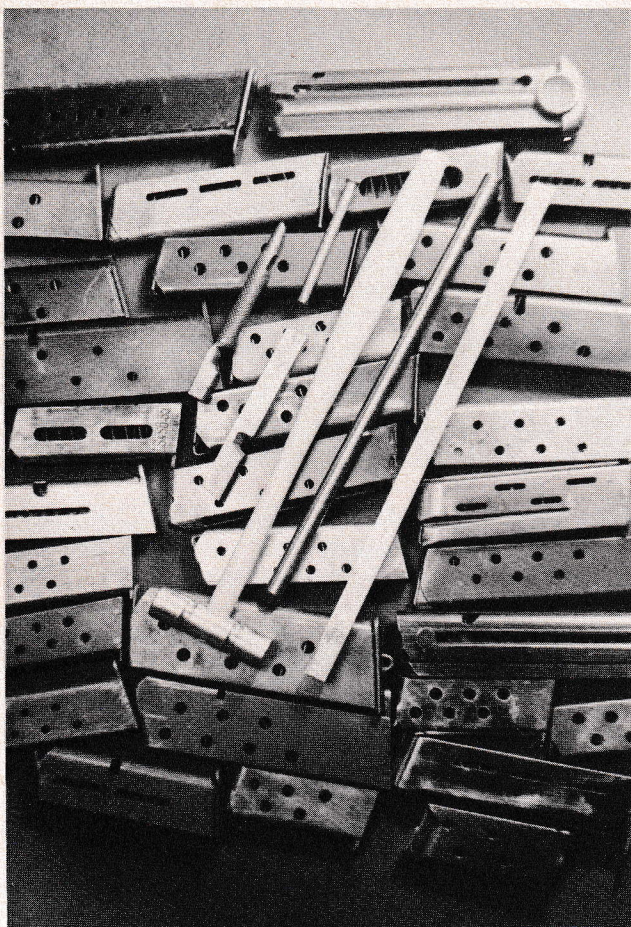
The availability factors point out that less than 40% of the Colt Models can be

(Continued on page 69)

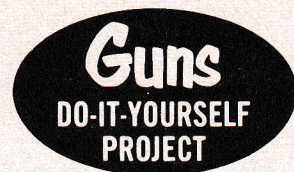
SUMMARY OF COMP. READOUT

ITEM	NO. MODELS	DOLLAR TOTAL VALUE	PERCENT AVAILABILITY	PERCENT (AVE.) GAIN		PREDICTED GAIN	
				1970	1971	1972	1973
COLT	89	50000	40	4	2	SAME	-1
REMINGTON	50	7000	95	5	8	15	22
S & W	20	7500	45	6	7	9	12
WINCHESTER	50	13000	90	4	1	-1	-2
MARLIN	19	3000	90	2	5	9	17

REPAIRING AUTO PISTOL CLIPS



Magazine repair tools: Small brass hammer, forming blocks, bars, and small bronze rod.



By J. B. WOOD

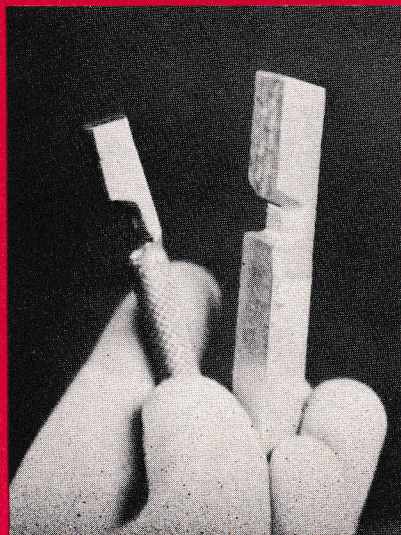
IT SEEMS TO BE an unwritten law: For every pistol magazine made, there is an amateur gunsmith with a pair of pliers who feels that he must "adjust" the magazine feed lips. The results can range from worsening the malfunction to completely ruining the magazine.

As anyone familiar with automatic pistols knows, a large percentage of their malfunctions can be traced directly to defective magazines. There *are* ways to repair them, but pliers are seldom the proper tool. The right way begins with a tool which I call a "forming block".

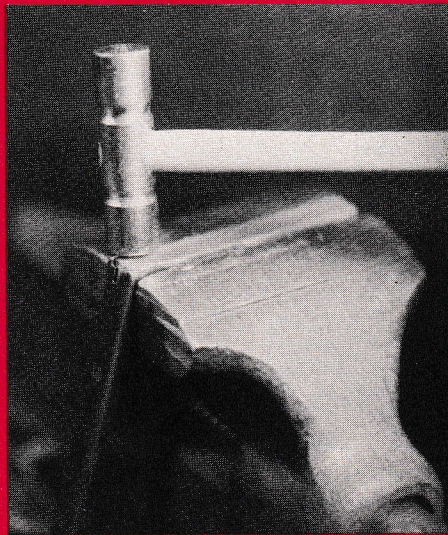
Basically, this is a short length of square-section steel, cut to clear the top forward edge of the magazine and fit tightly inside, lying just below the feed lips. Since it is very important that the forming block be a close fit, blocks have to be made for each caliber of magazine to be repaired. There will be slight variations within the same caliber among different manufacturers, and in these cases, shim strips of the same width must be used.

When the problem consists of feed lips which are deformed, or opened too wide, the forming block makes repair a fairly simple thing. With the block in place, and the external surface of the magazine protected by a piece of leather, the magazine top is gently clamped in a vise. *Very* gently, to avoid deforming the sides or backstrap. Then, using a small brass-headed hammer, or a steel ham-

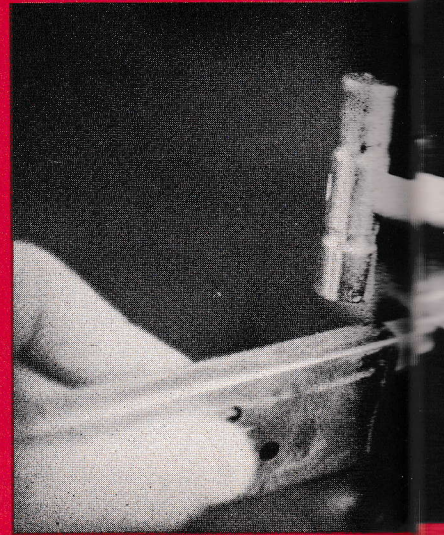
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mer and a flat piece of brass, the feed lips are lightly tapped until they are properly aligned. The function of the forming block and the vise is to insure that only the lips are altered. In the case of lips which are folded over too far, a sharp, wedge-ended piece of brass rod can be tapped between the lips and the forming block to lift the feed lips into alignment.

I do not know of any commercially manufactured forming blocks, so they must be handmade from bar stock. However, they are not difficult to make, and require no special plan. Perhaps it is better this way, since each tool can be fitted precisely to the magazine on which it will be used.

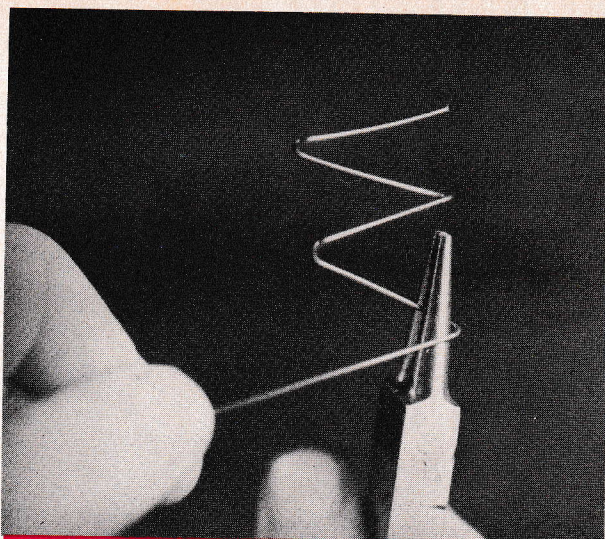
Another type of forming block is necessary for removing dents from the magazine body, and it is even more simple. Perhaps it would be more accurate to call this tool a "Forming Bar", since it is just that—a simple bar of steel, cut to fit the internal width of the magazine.

To use the forming bar, the magazine is laid flat on a firm surface, the bar inserted to lie against the dent, and the brass hammer applied to the outside. Care should be taken to avoid striking the magazine where it is unsupported by the bar, or you will have an additional dent! Unless the hammer is a small one, it might be best to use a brass rod or block centered over the dent, to reduce the impact area.

When a dent occurs on the front curved portion of the magazine, the forming bar cannot be used. For this, select a piece of drill rod which is of proper diameter to conform to the shape of the forward curve. One easy way to determine the right size is to try the fit of the shank portion of several drill bits, then obtain drill rod in the size that fits.

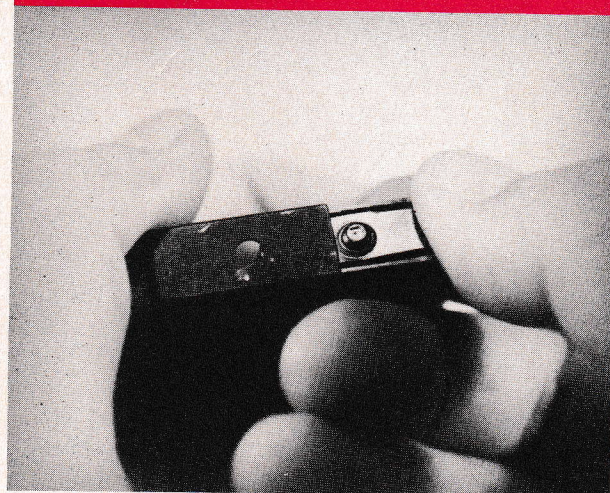
To remove a dent from the front curve, clamp the length of drill rod tightly in a vise, in a horizontal position, and slip the magazine body over the rod. Holding the curve firmly against the rod, tap the dent with the brass hammer until it evens out. This same method is used to remove dents from the back flat of the magazine, but of course the forming bar must be used instead of the rod.

Most feed lip repairs may be done without dismantling the magazine, by simply locking the follower down out of the way. This is done by *(Continued on page 56)*

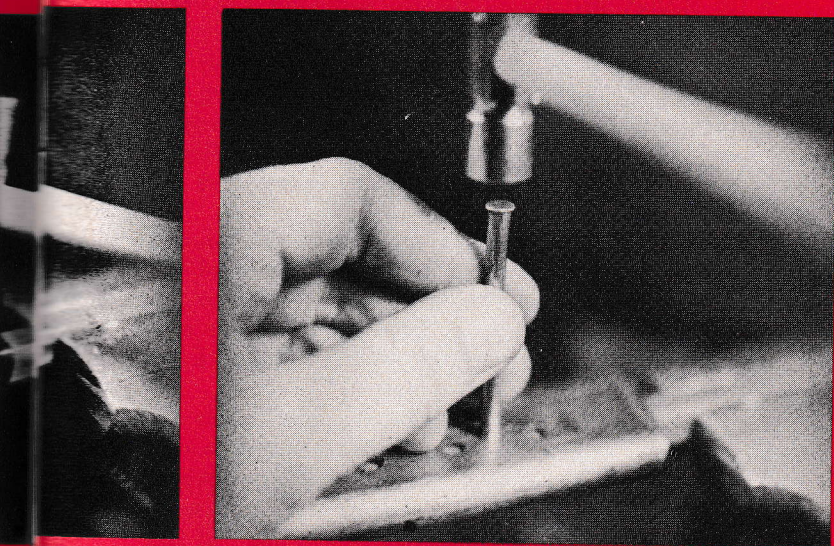


Hand winding an oblong coil magazine spring from tempered wire. The faint-hearted should avoid this operation.

When sliding floorplate off, hold lockplate in with thumb and ease it out. When replacing it, hold lockplate with thumb until floorplate is well started in its tracks.

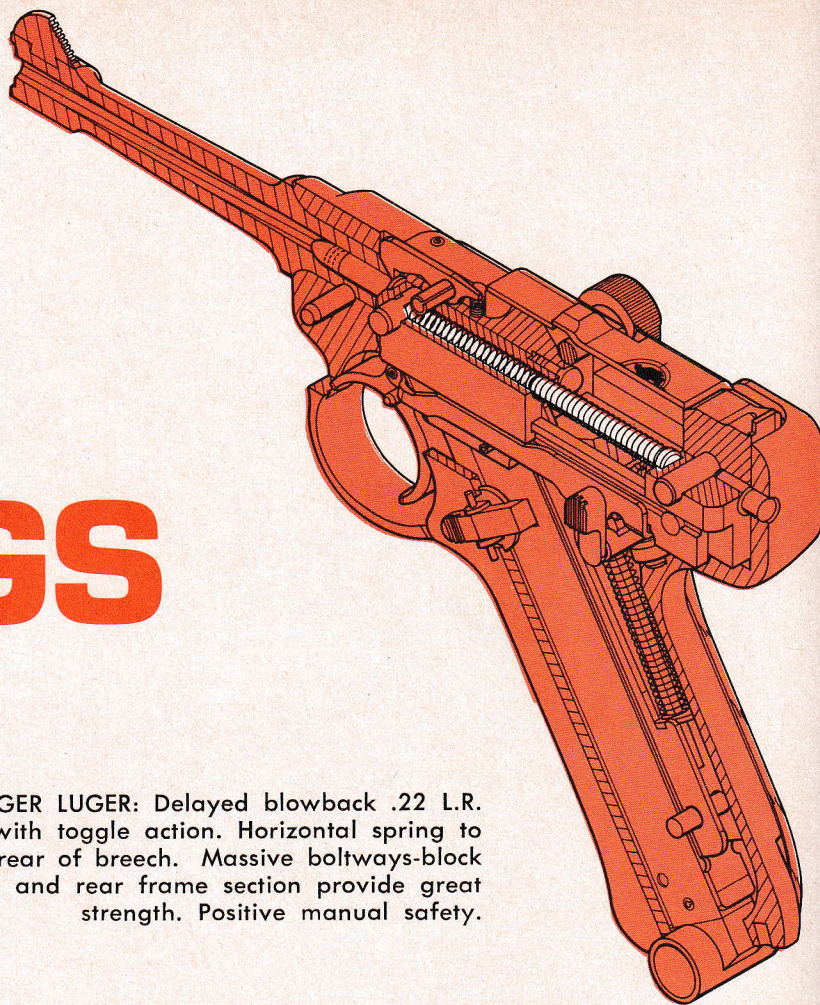


4



1. Two handmade forming blocks: The .25, (left) was made from an old punch. The .32, (right) was formed from steel bar stock.
2. The forming block is inserted into the magazine top, the top is then padded with thin squares of leather in the vise, and the brass hammer used to reform the lips.
3. Use the square forming bar and brass hammer to level a dent in the backstrap of a magazine. A round bar can be used on the front curve of the magazine in the same way.
4. To level a small dent in the side of a magazine, use the brass hammer, the square forming bar, and a length of bronze rod.

AUTO PISTOL RECOIL SPRINGS



By DENNIS RIORDAN

STOEGER LUGER: Delayed blowback .22 L.R. with toggle action. Horizontal spring to rear of breech. Massive boltways-block and rear frame section provide great strength. Positive manual safety.

BY DEFINITION, the recoil or operating spring is the powerful spring used to close the action of an automatic pistol, in process picking up and chambering a cartridge from the magazine. This is the only general statement that can be made about recoil springs; they have been patterned and employed with as much imagination as any other facet of automatic pistol design.

Since the earliest days, the coiled wire compression spring has been predominant, and with good reason: it is the most economical spring that can be produced, it is potentially the most dependable, and it does not completely lose its effectiveness even in the event that fracture should occur. On the debit side, the wire coil is easily kinked and requires spring guides to assure that this does not happen. Also, the gun must be so designed that the spring is not liable to damage during field stripping. Recoil springs formed of coiled ribbon steel hold their shape better than wire, but are relatively expensive to manufacture. The German Langenhan Models 2 and 3 and the Austrian Model 1912 Steyr-Hahn employed this kind of spring, but the advantage of the riband coil was so narrow that it has since become thoroughly obsolete.

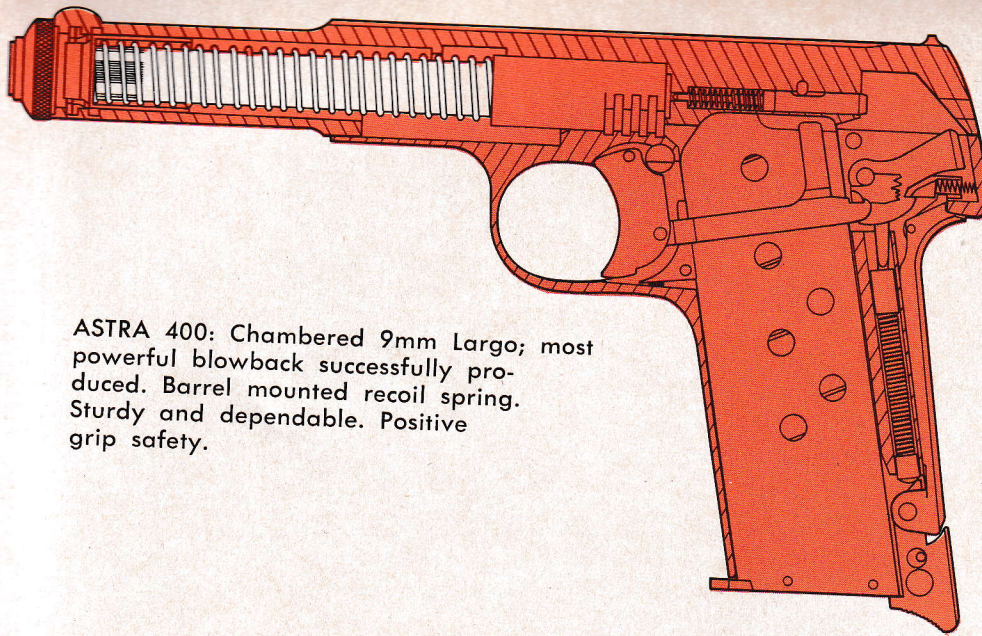
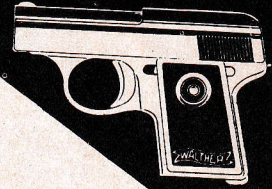
Other spring types are uncommon, but have been utilized in sufficient quantity that they cannot be ignored. The most important of these was the V-type recoil spring of England's Webley and Scott. W&S entered the field of automatic pistol manufacture in 1904, with a large frame .455. This gun employed a V-shaped recoil spring of forged steel, resembling an enlarged revolver mainspring.

It was mounted upon the right side of the grip frame and contacted the slide indirectly by means of a pivoted lever. All of the succeeding Webley designs, ranging in scale and power down to a tiny vest pocket .25, used recoil springs of this type. The spring itself worked well and caused no problems, though breakage of the hard rubber right grip which enclosed it was common. However, the Webley's V-spring was difficult and expensive to fabricate and seems never to have been copied. Even the U.S. made Harrington and Richardson automatics, which derived from the Webley designs, substituted wire coils for their recoil springs.

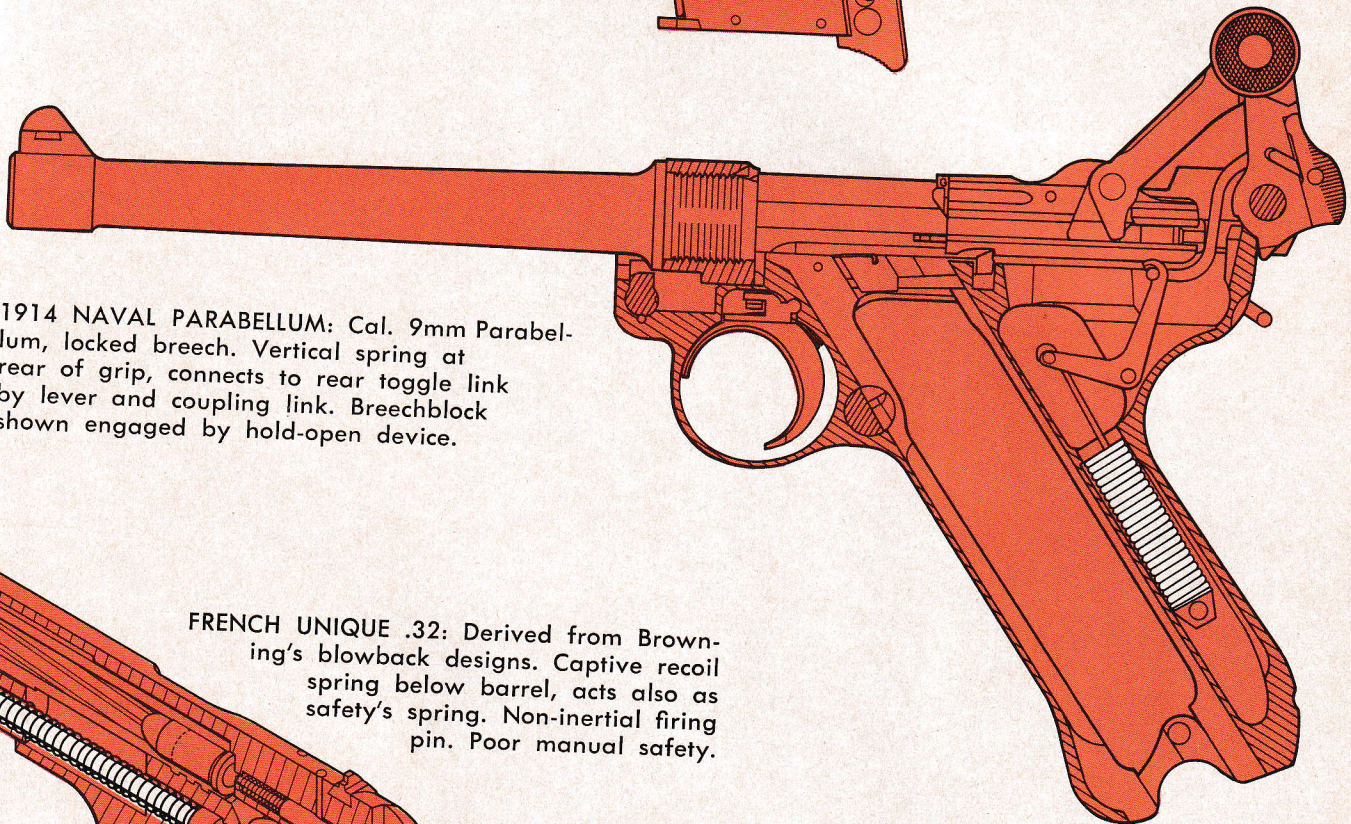
The German Borchardt used a recurved, roughly C-shaped recoil spring, sited within a separate housing aft of the pistol's receiver. The unit was expensive, inefficient, and very bulky, and it was discarded en toto in Georg Luger's redesign of the Borchardt, which emerged as the 1900 Parabellum.

The early Parabellum employed a unique dual laminated S-shaped leaf, positioned vertically within the rear of the grip frame and connected by a short coupling link to the rear toggle. Luger's leaf spring gave erratic results and tended to fatigue rapidly; in 1906 it was replaced by a wire coil.

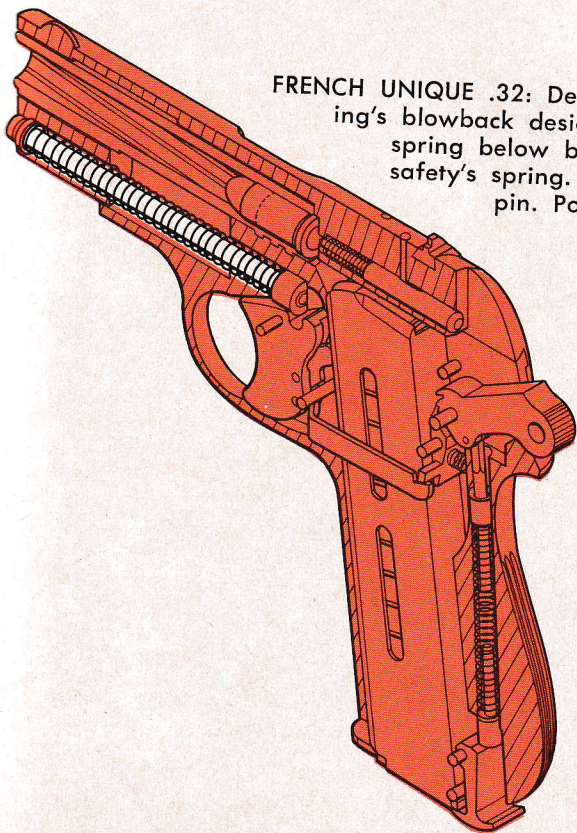
Beretta's 950 series pistols contain the only recent examples of recoil springs that are not of compression coil type. Early versions utilized two music wire springs mounted upon either side of the grip frame. These were formed into a rough "V" shape, though the point of the



ASTRA 400: Chambered 9mm Largo; most powerful blowback successfully produced. Barrel mounted recoil spring. Sturdy and dependable. Positive grip safety.



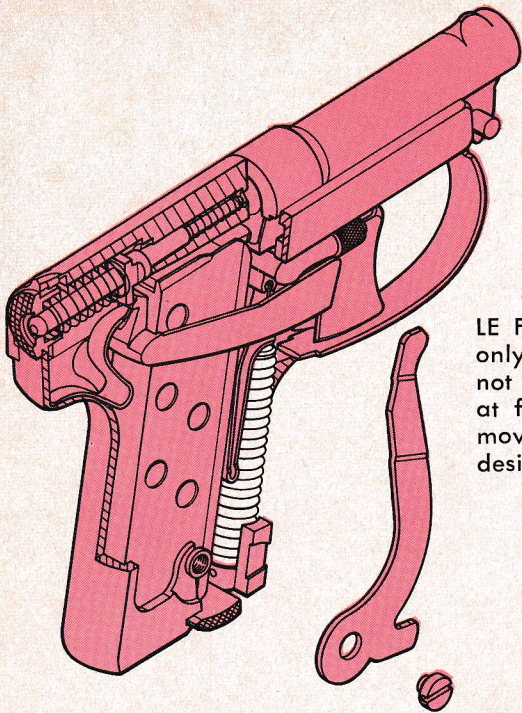
1914 NAVAL PARABELLUM: Cal. 9mm Parabellum, locked breech. Vertical spring at rear of grip, connects to rear toggle link by lever and coupling link. Breechblock shown engaged by hold-open device.



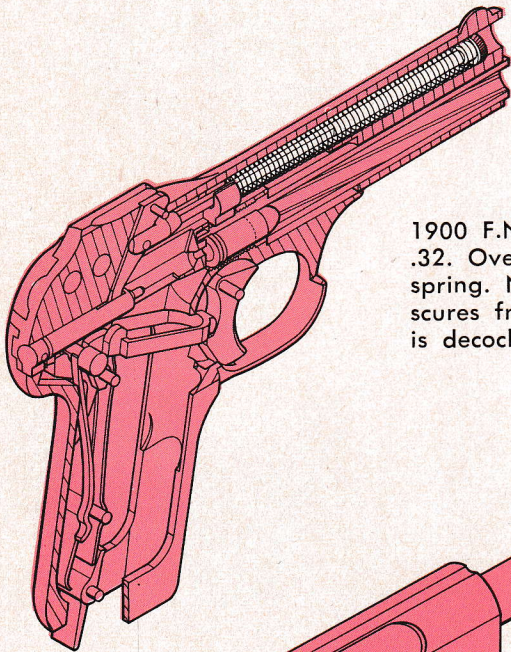
FRENCH UNIQUE .32: Derived from Browning's blowback designs. Captive recoil spring below barrel, acts also as safety's spring. Non-inertial firing pin. Poor manual safety.

V was circular rather than angled. The spring's rear leg seated into a frame notch, while the forward leg contacted the slide directly. Later models in this series employed a single music wire torsion spring, resembling nothing so closely as the spring of a mousetrap. A central loop bore upon the barrel latch and acted as its spring, while outer legs encountered notched seats upon either side of the slide. The spring mounted on a transverse frame pin located just to rear of the trigger.

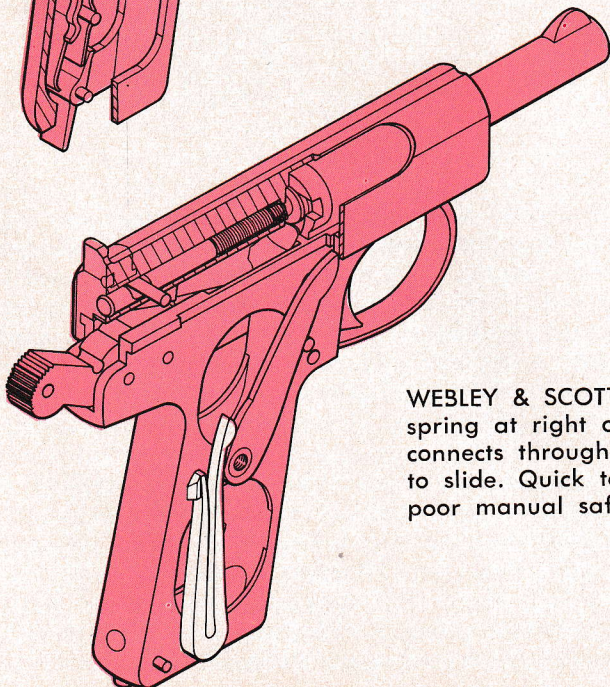
Compression coil recoil springs have been applied to auto pistols with wonderful variety; in the designs of John Browning alone, they are to be found in no less than four different locations. His first production gun, the .32 caliber F.N. Model 1900, possessed a coiled wire recoil spring, housed within a slide tunnel above the barrel. Undoubtedly, the great vogue attained by over barrel re-



LE FRANCAIS .25: Double Action-only-blowback. Self loading but not self cocking. Vertical spring at fore of grip (recoil lever removed for clarity). Very safe design.



1900 F.N. BROWNING: A blowback .32. Overbarrel recoil/striker spring. Nose of cocking lever obscures front sight when striker is decocked. Inefficient space use.



WEBLEY & SCOTT .32: V-type spring at right of grip frame, connects through recoil lever to slide. Quick take-down. Very poor manual safety.

coil springs in the early days owed to the incredible success of the 1900 Browning. The German Langenhan and Dryse, the Hungarian Frommer "Stop", the Austrian M 1908 Steyr, the Belgian 1908 Bayard, the Jieffeco, the Clement, the American Smith and Wesson autos based upon the Clement design; all had recoil springs of this type. Browning himself never used it again.

Overbarrel recoil springs have since almost completely disappeared, because they are inefficient of space. The barrel must be positioned at the top of the gun to obtain the greatest possible magazine capacity. This requirement was met in the first Colt automatic pistol by mounting the recoil spring beneath the barrel, enclosed by a full length slide. The gun appeared in 1900 and was John Browning's first locked breech pistol. Many of Browning's later designs followed this pattern and were, in turn, copied, simplified, and developed by manufacturers throughout the world. The influence of Browning's handguns have made the underbarrel recoil spring the most common of all, but not all pistols in this category are derivative of the Browning guns. The 1900 Mannlicher pistol also employed an underbarrel spring, but the Austrian gun was of completely independent design. Developments stemmed also from this pistol, as the Roth Steyr and Steyr-Hahn of Austria, Germany's Roth Sauer, the American Reising, and the early Star pistols of Spain.

An ideal location for the recoil spring is around the barrel itself. In this position the spring is most efficient, since it lies upon the axis of the reciprocating parts. Further, the barrel acts as a full length spring guide, practically eliminating kinking. The unsuccessful 1894 blow forward Mannlicher used such a recoil spring, as did the American Savage pistols and many others, but the most important single design was the F.N. Model 1912. This was Browning's last and finest pocket pistol and it was widely copied and developed; the most advanced pocket pistols of today trace their lineage back to this gun.

There is a mechanical limitation upon the barrel mounted recoil spring, however; it is practical only if the barrel remains immobile during firing. Barrel mounted springs are therefore rare in powerful handguns, though such guns do exist, as the big Astra blowbacks (Continued on page 54)

Lee Echols

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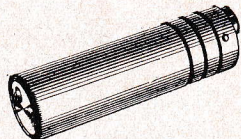


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PULL!

(Continued from page 51)

tain times of the day. I know shooters who try hard to be squadded on early morning squads. I know other people who will hang back and enter late, so that they will be sure to shoot in late afternoon. I prefer to shoot in late afternoon, probably because my eyes are very light sensitive, and the morning light bothers me.

Unfortunately, at big events like state, regional, and Grand programs, you can't always choose your shooting time. After learning this, I made myself shoot in morning squads, even though I didn't like the morning hours, because if you want to win, you must pay the price. Also, you must be able to do your best in all kinds of shooting conditions.

Many shooters I have known were completely different people in practice rounds, than when the event was for real.

Because practice rounds do not pay off in trophies, I forced myself to treat each round, practice or in a tournament, as if it were for a championship.


This became so evident to some of my club members that one of them once commented that he never saw a man shoot so hard to win a Coke.

What he did not know was that I attached as much importance to that Coke as I would have to a state championship.

In a sense, this was working on the hard shots. As a practice round, the shots were easy. They are not so easy when a major championship is at stake.

No shooting column including the game of skeet would be complete without a mention of that most terrifying of shots to the beginner, low house eight. By this time, I'm sure I don't have to spell out my advice to the skeet tyro—you guessed it—grab several boxes of shells and shoot low eight until it becomes second nature, and until you can mentally count this one in the bag, instead of quaking in your boots while you wait for this target.

Old-timers will tell you that this is the easiest shot on the field, but it won't be until you think that it is. It may take several boxes of shells to convince you, but then, nothing that is worthwhile comes easy.

You will have more fun if you work on the hard shots, and really enjoy yourself when no shot is a hard one. 

AUTO PISTOL RECOIL SPRINGS

(Continued from page 36)

(M400, M600, Condor) and the P9s by Heckler and Koch, a delayed blowback whose barrel does not move.

The German 1896 Mauser and the 1896 Austrian Mannlicher pistols had much in common. In both designs, a sliding breechbolt moved within a heavy barrel extension, and both featured a coiled recoil spring centrally located within the hollow breechbolt. Many of the early automatics were of this pattern, as the German Bergmann and Simplex, the Bergmann-Bayard of Belgium, and the Italian Glisenti. The L-35 Finnish Lahti came much later and differed from the others in that its recoil spring, while enclosed by the breechbolt, was permanently attached to the rear of the frame. Most of these guns were

large, locked breech designs. None survive today, but the type endures in the Ruger automatic pistol, an extremely successful .22 L.R. blowback introduced in 1949.

The 1896 Schwarzlose, a German design, was notable in that it anticipated the slide, a design element which Browning would later bring to such prominence. The gun was a powerful locked breech pistol employing a cylindrical bolt carrier which moved fully exposed upon the top of the frame. The rotary bolt within, enclosed a coiled recoil spring, which in this design served also as a striker spring. The Schwarzlose enjoyed little commercial success and quickly faded from the scene, but certain of its elements reappeared in

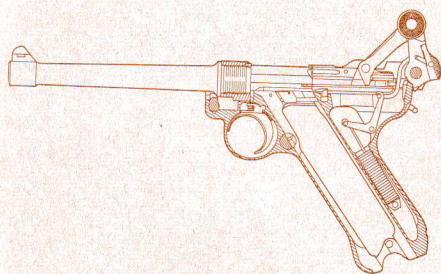
the first .22 L.R. automatic pistol, the Colt-Browning of 1915. This gun featured a true slide riding upon frame rails and containing a coiled recoil spring to the rear of the breech. There have been many variations and developments of this Browning design, the most important being the excellent High Standard target pistols of today.

In the Japanese Nambu of 1904, a single compression coil recoil spring was housed in a tunnel at the left of the frame. Its full length guide connected to the rear of the bolt by an arm at the side of the cocking piece, and compressed the spring from the front. The vastly simplified Nambu Model of 1925 employed twin springs seated into deep grooves on either side of the bolt. These springs were compressed from the rear by twin ears at the rear of the frame, as the bolt passed between them.

The now defunct Automag positioned its twin recoil springs within tunnels on opposite sides of the frame. The layout was similar to that of the early Nambu, except that the Automag's springs were arranged below the bore axis. Again, like the Nambu, full length spring guides attached to the cocking piece, compressing the springs from the front.

The Walther P-38 mounts two coiled recoil springs within full length grooves machined atop either side of the frame. Twin spring guides contact the front of the slide, compress the springs as the slide moves to the rear.

The "new model" Parabellum (1906 to date) employs a vertical coil spring at the rear of the grip. A full length guide compresses the spring from below, connects through a pivoted lever

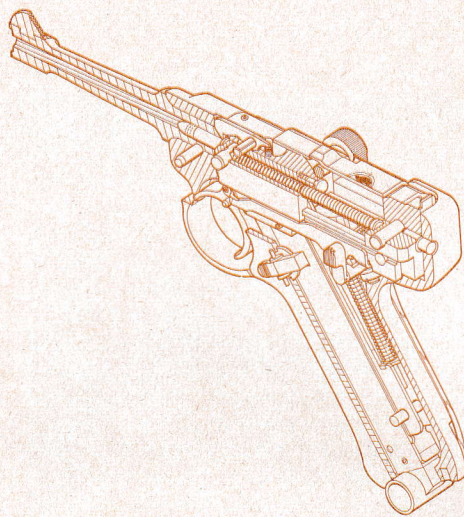


to the coupling link, which was retained from the original model. The system is complicated and expensive, but it works well and dependably, and it allowed the retention of the Parabellum's beautiful styling.

Current toggle action Erma pistols, which range in caliber from .22 L.R. to 9 mm Parabellum, reflect the Parabellum's styling but differ internally. All are retarded blowbacks whose barrels do not move in firing. These pistols employ a coiled recoil spring, horizontally located within the frame,

just beneath the action; its guide contacts a nose extending downward from the rear toggle link, compresses the spring as the toggle pivots on its pin during recoil. The 9 mm Parabellum version uses twin recoil springs, mounted side by side.

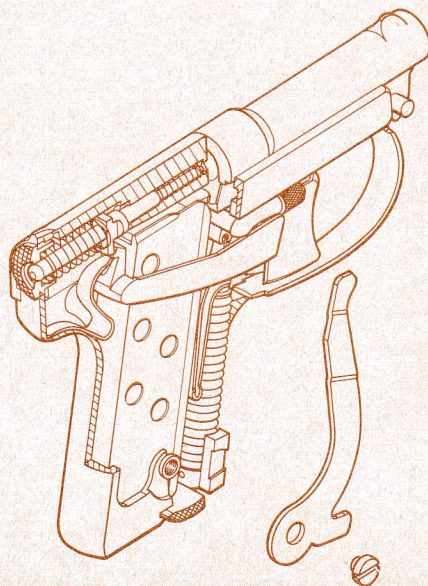
The American Stoeger Luger is also



outwardly similar to the Parabellum in styling and balance, and retains, in modified form, the former's toggle action. The Stoeger's barrel is fixed to the frame and the Parabellum's barrel extension has been eliminated, while the sides and rear of the frame have been extended upward to enclose the action. The sheet metal toggle links interpose only a slight delay to the action, and its coiled recoil spring is located within the breechblock.

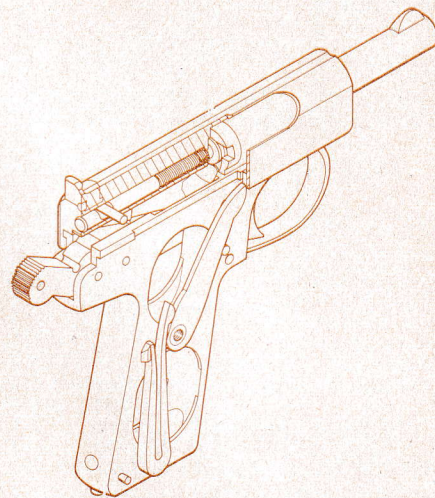
In the French "Le Francais" pistols by Manufrance, the recoil spring was placed vertically at the front of the grip frame. Twin pivoted levers, sited upon opposite sides of the grip, contact a compressor at the base of the spring, and extend upward to seat into slide notches.

The recoil spring of the "Le Fran-



cais" models has never been copied, though the vest pocket pistol version was otherwise strongly imitated in the 950 series Beretta pistols, as well as the later Model 20. This last features twin recoil springs situated vertically within either side of the grip, which are compressed from the top down by two pivoted recoil levers which also contact the slide.

These examples comprise all of the common and most of the obscure applications of recoil springs to automatic pistols. Obviously, the wire coil compression spring has never been seriously challenged: leaf springs were attempted, but simply



did not work, while riband coils and Webley V-type springs can be assumed obsolete, because of cost factors. The appearance of compression coils on Beretta's Model 20 indicates that the firm has abandoned their flirtation with other spring types.

Coil springs have already been positioned in every conceivable location, though there is still room for experiment with dual springs. Nested recoil springs (inner and outer coils wound in opposite directions) have been used in other automatic arms and may have an application to pistols as well.

The present trend is to locate the recoil spring behind the breech in .22 sport and target guns, around the barrel in pocket pistols and small frame holster models, below the barrel in vest pocket designs and locked breech Browning types.

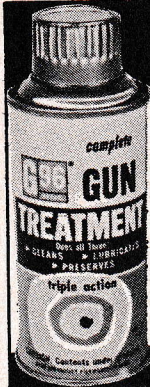
The continued interest in the Parabellum pistol indicates that there is a potential market for a full power pistol along similar lines. Erma of Germany appears to be the only firm that is active in this direction. Aside from the Parabellum itself, Erma's KGP 9 mm pistol and Walther's P-38 are the only current full power automatics that do not use a full length slide and a coil spring forward of the breech.

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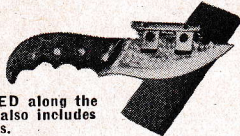
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REPAIRING AUTO PISTOL CLIPS

(Continued from page 33)

using a brass rod to push down the follower, then inserting a small screwdriver above the follower through the cartridge counter holes.

Removal of dents on the magazine body will often require disassembly, and in most cases this is not difficult. Magazines may be roughly divided into two main groups, those having fixed and removable floorplates.

The fixed floorplate may be welded to the magazine body, the body may be folded across it, or it may be attached by cross-pins. It is possible to remove the cross-pinned type, but this is not advisable, as the pins used are often fairly soft and semi-riveted at their ends.

To dismantle a fixed-floorplate magazine, push the follower down to one of the lower counter holes, and insert a small screwdriver between the follower and the top loop of the spring. Then, using a slim rod, preferably bent into an "L" shape, reach through an adjoining counter hole and push the follower upward until it clears the spring and can be removed from the top. Finally, hold a shop cloth over the magazine mouth and remove the screwdriver to release the spring. When removing the spring, note carefully which end is "up", and whether the top loop of the spring is toward the front or rear, so that reassembly will be correct.

To reassemble, push the spring back into the magazine, using the thumb to hold it even with the top. Place the tail of the follower on the spring, depressing it slightly as it is slipped in beneath the feed lips. If the top spring loop does not snap into place beneath the follower, it will be necessary to reach in with the L-shaped tool and flick it into place.

Magazines with removable floorplates are less difficult to disassemble. Most of them have a sliding external plate with a hole at center to admit a stud on an internal lockplate. For disassembly, a small-diameter

tool is used to depress the center stud, and the floorplate is slid off toward the front. Keeping in mind that the magazine spring is under partial compression, it is best to slide the floorplate halfway off and get a good grip on the lockplate, or just hold a shop cloth over the end of the magazine while removing the floorplate. If that internal lockplate gets away, it can go quite a distance, and might even cause injury if it struck an eye. Once the floorplate and lockplate are removed, the spring and follower are simply removed from the bottom of the magazine body. To reassemble, just reverse the takedown steps.

There are a few magazines which, for several reasons, should be taken to a competent gunsmith for repair. Some, like the Luger magazine, are difficult to take down and reassemble. Others, like the Radom, early models of our 1911 pistol, and many .22 sport and target pistols have feed lips or cartridge guides which are tempered. Any attempt to re-form these hardened sections will likely result in breakage, unless the area is annealed before forming.

The magazine of the 9 mm Polish Radom pistol deserves further mention: Not only does it have tempered feed lips, it also has a full-formed solid follower, and a floorplate that is semi-permanently attached with two cross-pins. When repair is necessary, the only way to remove the spring and follower is to drive out these pins, and this is usually difficult to do without some deformation of pins or magazine body.

The steel used in magazine bodies is of a compromise thickness. It must be thin enough for forming during manufacture, and to keep the grip frame from being too "fat", yet heavy enough to prevent damage or unfolding of the feed lips. Most magazines are made of exactly the right weight

(Continued on page 60)

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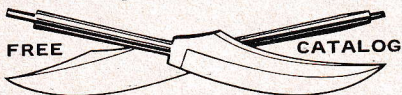
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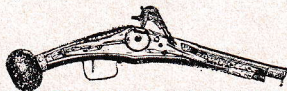
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(Continued from page 56)

steel, but there are extreme examples in both directions. The Russian Tokarev pistol has a very heavy magazine, and has less need of one than other pistols. Projections from the sub-frame of the Tokarev extend forward to lie against the feed lips of the magazine, supporting them and forming an additional cartridge guide. In contrast, the German Ortgies pocket pistols, which have no such supporting area, have magazines of very light steel, and the feed lips of these frequently unfold.

Weak magazine springs are a problem that is a bit more difficult to solve than damage to the body or feed lips. Magazine springs in most pistols will be of two general types: Round helical coil, or, more likely, a flat coil, sort of round-ended rectangular when viewed from the top. The round type can easily be wound by any gunsmith. The flat type must be made by hand, and is quite a job, even for someone with the proper tools and skill, so perhaps in this case it would be wiser to replace it, if a duplicate can be found.

The magazine follower is one of the most important elements of the feed system, as it shares with the feed lips the function of positioning the cartridges for proper alignment with the feed ramp into the chamber. Most followers fall into two main categories: The fully-formed or "solid" type, and the folded sheet-steel type. The "solid" type, found mainly in magazines having removable floorplates, is by far the best, as it is al-

most impossible for it to become deformed or mis-aligned.

The folded type, when undamaged, works just as well. Even a slight opening or closing of its angle, however, can cause a malfunction. The degree of this depends on the sensitivity of the feed system in a particular pistol. Generally speaking, the platform portion of the follower should have the same relationship to its backpiece as the floorplate has to the angle of the magazine body. In other words, the platform should be level with the top edge of the feed lips.

To restore the proper angle to a deformed follower, clamp its backpiece in a vise, the top edge of the vise jaws at the fold point. If the angle is to be widened, insert a screwdriver under the platform and lift gently. If it is to be closed, pressure with the thumb will usually do it, or it can be lightly tapped with a brass hammer near the fold point. Make small adjustments and try it in the magazine between each one. Avoid too much bending back and forth, or metal fatigue will leave you with two useless pieces.

Perhaps some of the foregoing information will enable you to save a damaged but otherwise good magazine. I will admit, though, that some are beyond any help. In that case, it is good to know that new, well-made duplicates of many types may be obtained at reasonable prices from Triple K Manufacturing Company, 568 Sixth Avenue, San Diego, California 92101.

IN THE FRENCH MANNER

(Continued from page 45)

ber 5000, a separate internal pivot screw of larger diameter was adopted and the grips retained by more conventional centrally located screws. About this same time, the "Type Policeman" was introduced. Production of both was halted by World War I and was not resumed until 1920. Postwar production serial numbers start at about 10,000 and are located on the right side of the barrel underneath the chamber. These should not be confused with a one digit number preceded by the letters "No." on the right side of the barrel lug. This is a

finish description. Finish numbers run from 1 to 4 for the pocket and 5 to 8 for the "Type Policeman."

In the mid-20s, Manufacture tried to capitalize on the popularity of their pistols by introducing a third model intended for target shooting called the "Champion." This arm was apparently poorly received as it is known only from catalog illustrations. To make it suitable for target use, the barrel was lengthened still further. The front sight was made drive-adjustable for windage and the rear sight screw adjustable for elevation.

GUN COLLECTING TODAY

(Continued from page 23)

considered available at any realistic price. Whereas, the Remington availability is up to over 95% at average values. The Smith & Wesson availability factor was calculated by the computer at less than 45% at average prices, or in most cases realistic values. Winchester availability factor is over 90% or the same as the Marlin factor.

Most new and old collectors know that most attics have exhausted their

treasures, and therefore some consideration or planning must be given the potential finding of specific arms at reasonable values. Thus the collector can appreciate the chances of completing a collection based on what is available.

Hopefully, this survey may serve as an indication as to what has happened and what is happening to some fields of collecting.



TP-70: A PISTOL WITH CLASS

(Continued from page 27)

The pistol is safe to carry with the chamber loaded and the hammer down but it is suggested that the mechanical safety be left engaged nevertheless. Rotating the mechanical safety to "fire" clears the way for the hammer blow to be transmitted directly to the end of the spring-loaded striker. The striker is mounted within its spring and the hammer blow forces the striker forward; the forward-moving striker compresses the spring and after contact with the primer, the spring retracts the striker into the rear face of the slide. Thus, with safety engaged, the striker cannot be struck by the hammer and its spring prevents its going forward on its own to hit the rear of the chambered round.

In actual firing with a hundred or so rounds of regular and high speed .22LR ammo, no malfunctions of any kind occurred; feeding, extraction and ejection all coming off smoothly. Overall handling qualities of the little pistol can only be described as excellent. The magazine body is made of stainless steel as mentioned earlier and feeding is noticeably smooth. No need to worry about finger marks all over the magazine on this jewel!

The TP-70 is delivered in a small brown cardboard box which contains a test target, an instruction booklet in German, and a small nylon-bristled bore cleaning brush. The box of my .22LR pistol also contained a type-written note in German which cautioned against dry-firing—being a rim fire weapon, the note said that dry firing could break the tip of the striker. These clues: type-written notes, long delivery delays and so on, indicate that the Korriphila is not

being produced in any great quantity at this time.

The illustrations for the TP-70 as shown on the booklets and in other descriptive literature clearly shows the name "Korriphila" on the left of the slide along with the firm's address in Ulm, Donau. Yet on my pistol, the firm name of "Budischowsky Waffen GmbH" is stamped on the slide. The dealer from whom I obtained the pistol couldn't explain this state of affairs. Pending a further look-see, it would appear that the Korriphila is made up for Budischowsky but in any case, this minor mystery doesn't distract from the apparent value of the little pistol.

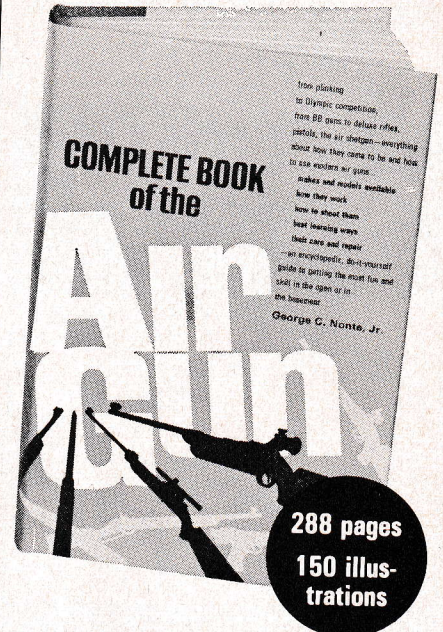
Since obtaining my own Korriphila, my attention was brought to an ad which appeared in a German magazine of 1971 vintage: it was an offer by the Korriphila company to sell a prototype of a double action 9mm Parabellum auto pistol, serial number 0001. It would appear, then, that the Korriphila company discovered that in the big bore handgun league, the marketing of a military-type pistol is a rough proposition, what with the going competition from France, Belgium, Spain and Italy. In any case, I have heard no more about production of any other handguns save the little TP-70 in the .22LR and .25ACP versions. The TP in the model designation, by the way, stands for "taschenpistole", or pocket pistol, which is a pretty good tag for this mighty mite of a handgun.

The TP-70 is now available in the U. S. from Norton Armament Corp., 41471 Irwin, Mt. Clemens, Mich., 48043. Price of the little pistol is \$100.



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