

Chapter 1

TOOLS FOR THE BEGINNER

*The Assortment Of Equipment Is Endless, But
Here's A Start For The Beginning Gunsmith*

MANY TIMES over the years, I have been asked, "What tools would you recommend as a basic group for doing gun work in my home?"

This question, in turn, brings a host of other questions, including what type of gun work the individual will be doing? There are almost limitless phases to gun work. Some may specialize in stock work, building and finishing stocks for new barreled actions. Others will prefer to work on nothing but gun actions, while some will want to devote their efforts to creating super-accurate barrels. Each of these approaches requires a great variety of specialized tools with which to get the job done right.

Then, too, there might well be some who prefer working on older guns in the field of restoration. This can be a highly lucrative field, as there is great demand for those who are adept at this type of work and able to do it correctly.

But let's assume that one is interested only in general gun repair or building a gun kit now and then, but is dubious as to where to start in acquiring the necessary tools. No

true craftsman in any mechanical trade ever has enough specialized tools to fulfill his needs. He is always adding to his assortment. Be it files, chisels, precision instruments or even screwdrivers, more are always needed.

However, for the true beginner there is no sense in starting at the bottom of the pile as far as tools are concerned. When tools are purchased, even for a hobby, buy the best. Purchasing cheap, poor-quality instruments usually is the same as throwing away your money. The best tools should last a lifetime with proper care, while cheap inferiors can only lead to frustration and, as a rule, poor craftsmanship. Pride in the quality of your tools equates to pride in the quality of the work you do with them.

It certainly is not necessary to have an elaborately equipped shop, complete with the latest and best in lathes, milling machines, drill presses, ad infinitum, in order to turn out beautiful work. Some of the most beautiful rifles, pistols, fowling pieces, even cannons were turned out well over a century ago by craftsmen who used primitive tools. But these craftsmen knew how to use the tools, then available, properly.

The Basic Gunsmithing Kit put together by Bob Brownell includes a variety of tools that will prove invaluable to the journeyman gunsmith or the just beginning novice.





Those who want to work with firearms will need a variety of hammers. Illustrated here are ballpeen hammers, as well as nylon, brass and rawhide-headed mallets. All of these will see much use in any gunshop.

One firearm that illustrates this point would be the beautiful and graceful Kentucky-type rifle, considered as one of the most handsome and beautiful arms ever made. The conditions under which these highly accurate rifles were made were primitive at best. There were no precision lathes or milling machines in the shop of the frontier gunsmith. Those labor-saving devices hadn't been invented yet. Thus, the early craftsman relied upon handtools—usually of his own manufacture. Precision instruments, such as dial calipers and micrometers also were still unknown. A handmade set of dividers, inside and outside calipers were about the extent of his precision instruments. These, and sharp eyes, were all he needed.

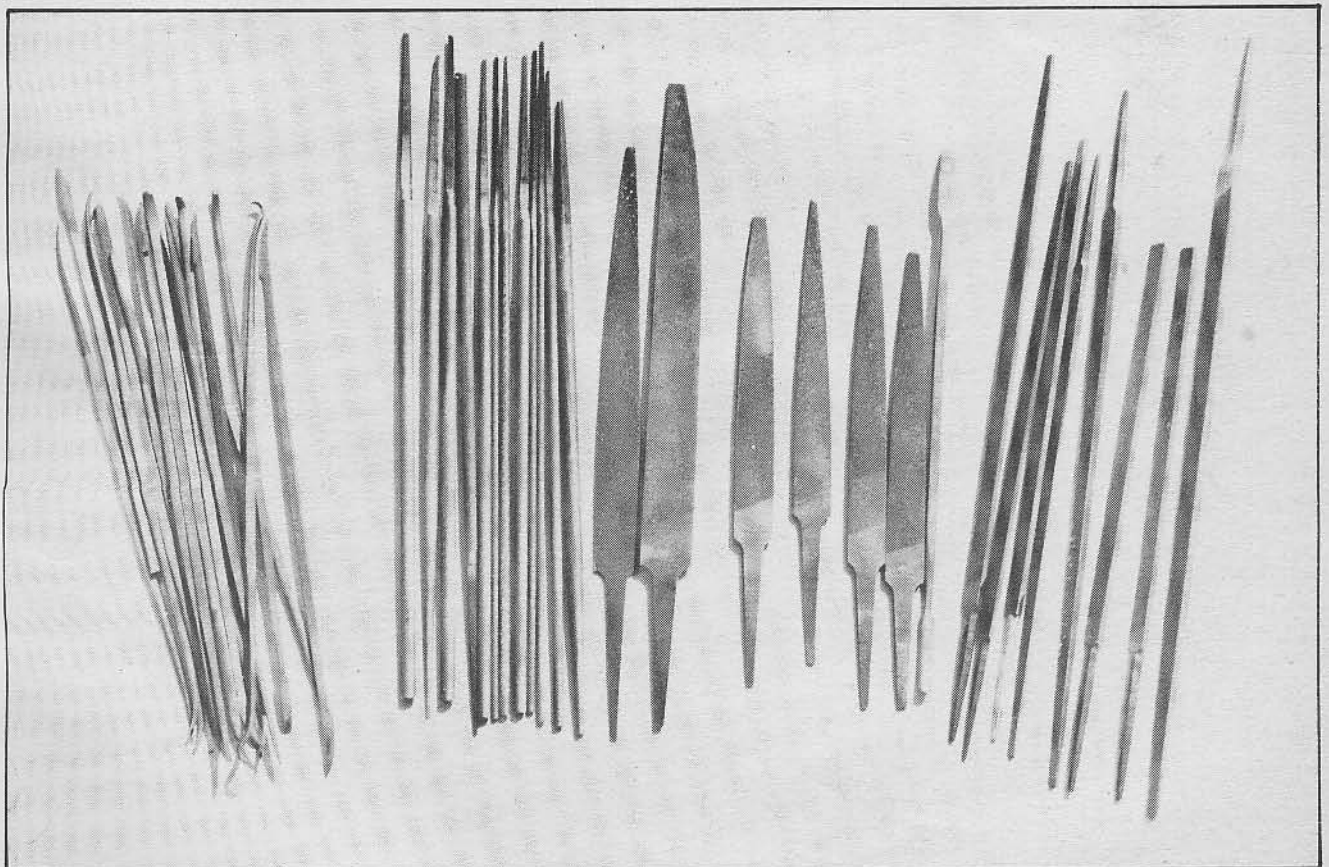
In the present age, precision tools are commonplace, but not cheap! One might have unlimited funds with which to buy the finest machine tools, but ability to buy certainly is no indicator of an individual's ability to use such equipment to produce outstanding work. The mark of a crafts-

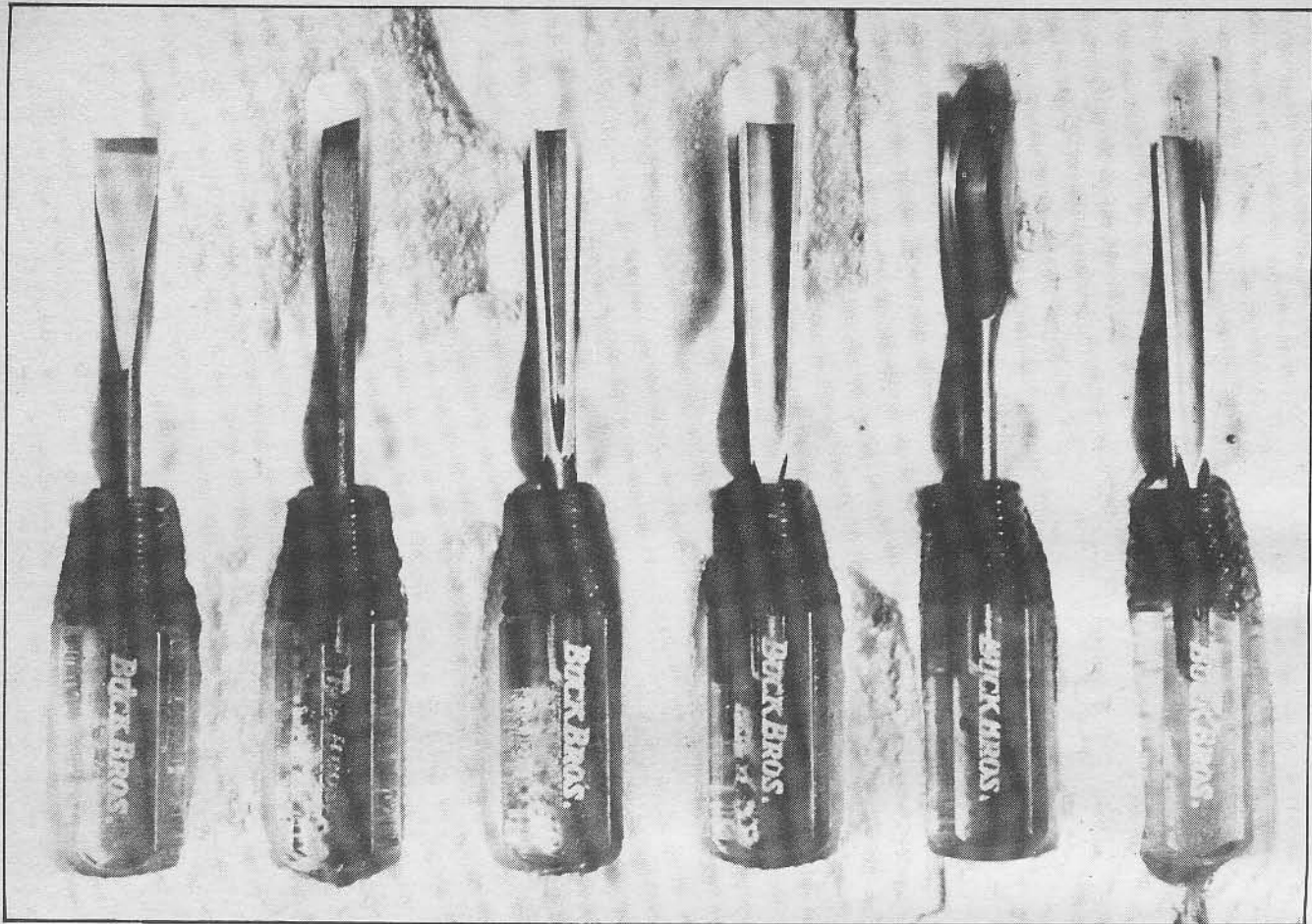
man is best illustrated by the quality and the beauty of the work he turns out.

Taking these thoughts into consideration, let's get back to that beginning gun worker who wants to get off on the right foot as far as his tools are concerned.

Brownell's of Montezuma, Iowa, the largest and best known gunsmith supply house in the nation, has what Bob Brownell calls the Basic Gunsmithing Kit. But before we go into the details of this kit, let me tell you a little about **Bob and Frank Brownell**. The father and son who operate this company both are well versed in the needs of the working, professional gunsmith. They know the field inside out and their reputation is the highest. I have dealt with the Brownells for well over forty years and have come to be convinced that they have the best interests of the working guncraftsman at heart. Every tool they offer their clients is the finest, bench-proven instrument available. I feel that this also applies to every other product included in their

Over a period of time, the gunsmith or repair hobbyist will need countless files for the many and varied jobs that occur in gunsmithing. Although more expensive, top-of-the-line files will pay for themselves through use.





A good set of chisels is a must on the gunsmith's bench. Buck Brothers produces a quality chisel set at a price that most of us can afford. Almost every type of chisel necessary for general gun work is included in the set.

thick catalog devoted to the gunsmithing trade.

Brownell's Basic Gunsmithing Kit is just that: a basic kit. But it will get the newcomer off to gun work on the right foot toolwise. Each tool in this kit was hand picked by the Brownells to meet the basic needs of the beginner. All are professional in quality, the same as those tools used by the working professional gunsmith.

Consisting of twenty-four tools, plus six additional screwdriver bits and a \$5 coupon toward the price of any gun book listed in Brownell's catalog, this kit includes:

- 1 No. 100 Sargent Parallel pliers, 4½ inches long
- 1 One-inch Brass/Nylon Hammer
- 1 No. 81 Magna-tip Solid Screwdriver Handle
- 7 Hollow-ground screwdriver bits

- 2 Instrument screwdrivers, sizes 2.3 and 2.9mm
- 1 Mainspring vise
- 1 MF-134 triangular India stone, ¾x4 inches long
- 1 Cleaning brush
- 1 ⅝x6-inch pin punch
- 1 5/32x6-inch pin punch
- 1 1/16-inch starter punch
- 1 3/32-inch starter punch
- 1 Set of replacement pins, two inches long
- 1 Nylon and brass drift punch set
- 1 Gunsmith bench knife
- 1 Eight-inch hand file, No. 2 cut
- 1 Sight base file
- 1 Four-in-one handrasp
- 1 Scribe hook

- 1 No. 1033-6 chain nose pliers
- 1 Screw Check'r
- 1 Tool box with three removable trays
- 1 Instruction booklet
- 1 No. 91 Allen wrench set

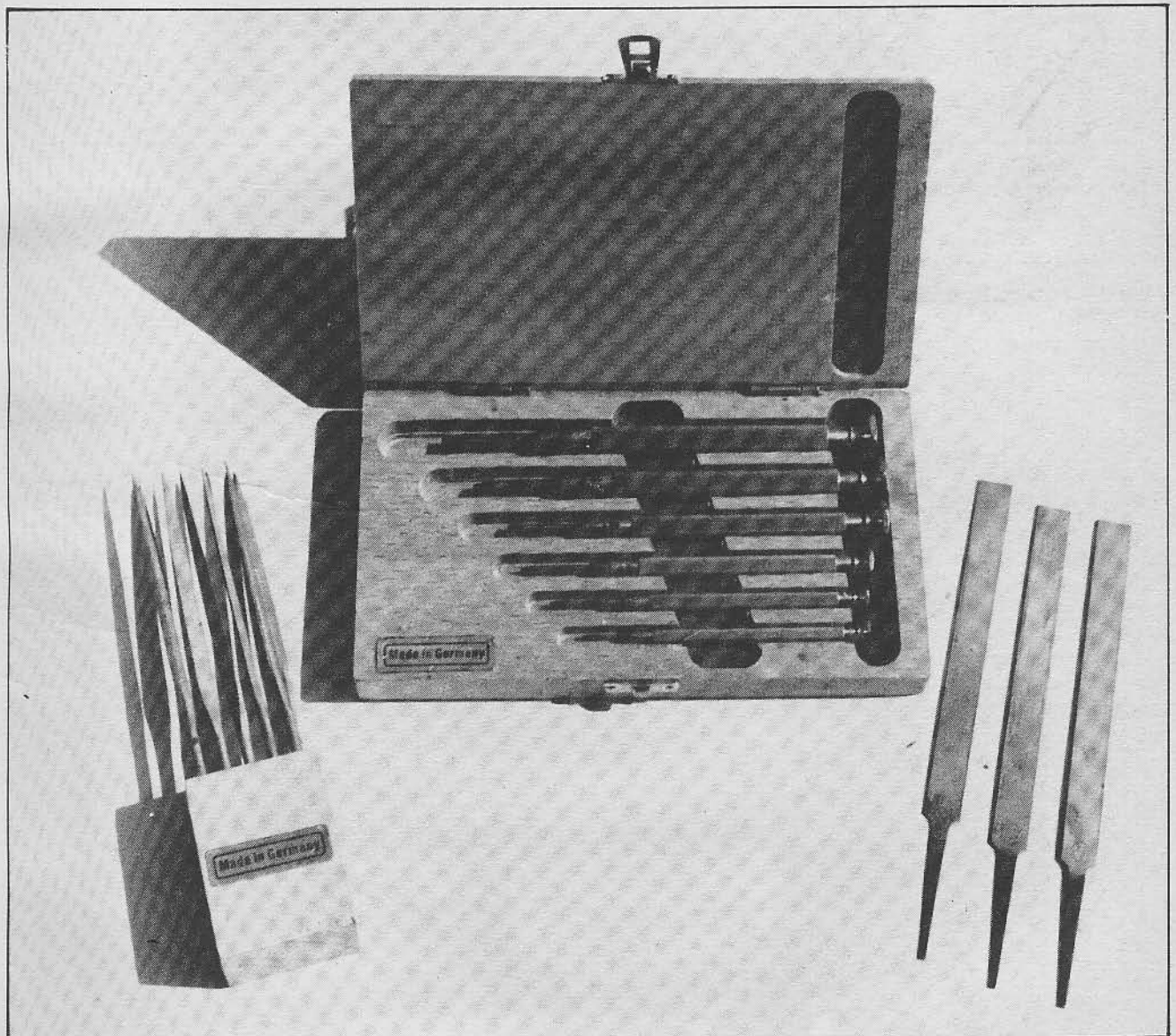
As of this writing, this kit has a price tag of \$93.75 plus postage and is an excellent start toward assembling gunsmithing tools. Additional tools will be found necessary as time goes by, of course. The beginner will find that each

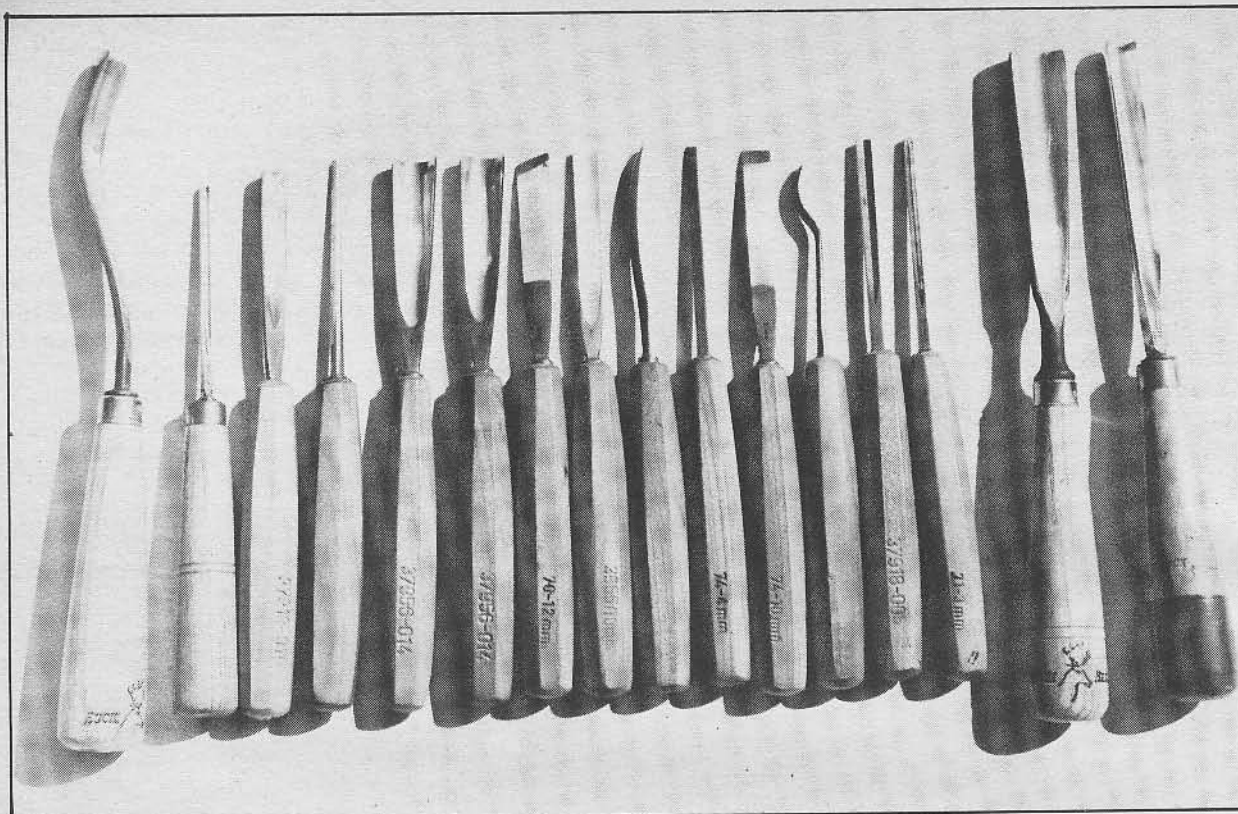
gun job will create a need for different tools — and a place to store them properly.

Aside from tools, the most important need for the gun hobbyist is a solid workbench. On the bench should be mounted a quality bench vise with a swivel base. One soon will discover that this vise will be the most used tool in his shop. It should have removable jaws of cork, lead or other similar materials that will protect guns or other items being held in the jaws.

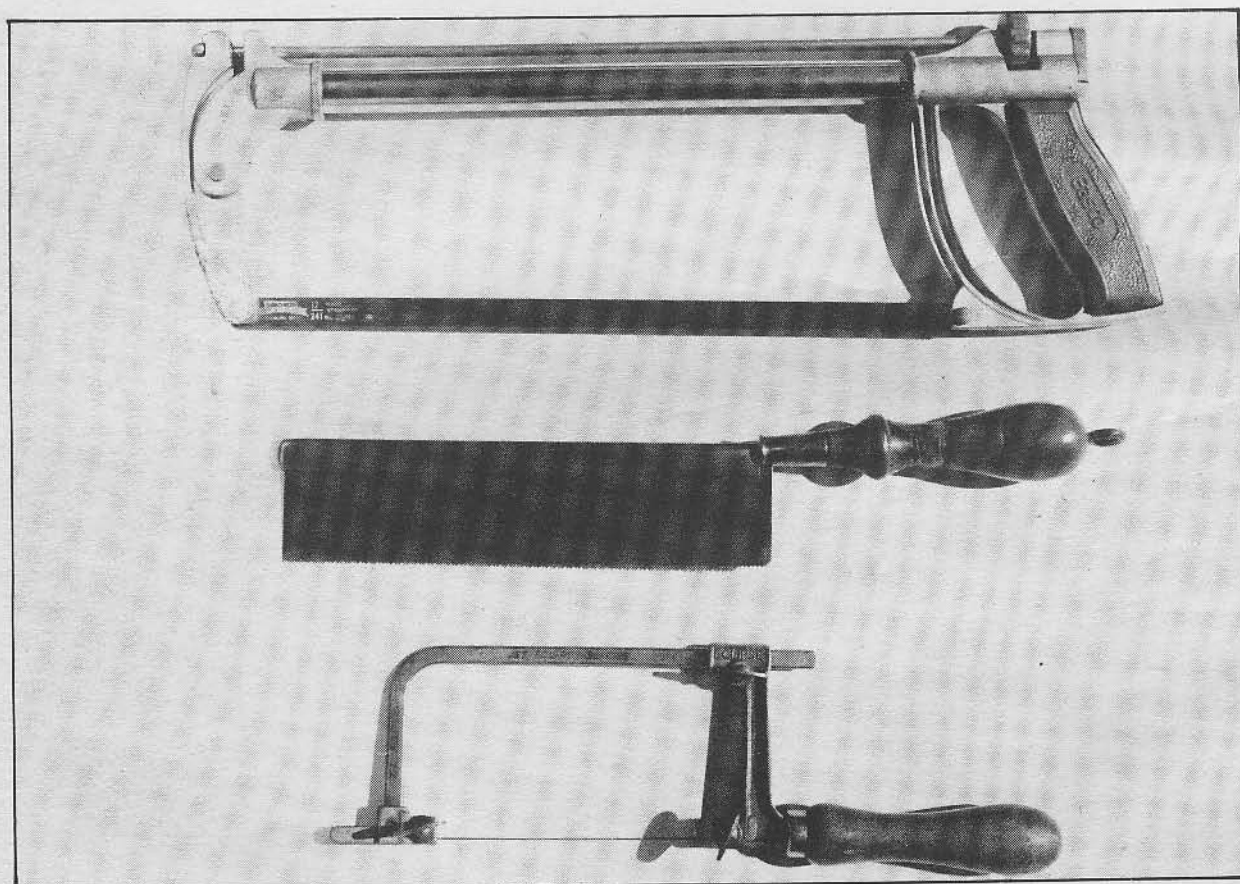
An assortment of quality woodworking chisels is an-

A set of instrument screwdrivers, a set of twelve Swiss needle files and a set of screw slotting files are recommended as highly necessary for most gun work.





Should one plan on extensive stock and wood work, these channel gouges from Buck Brothers and a full set of woodworking chisels by J.A. Henckel's Twin Brand are as good as money can buy anywhere, author says. (Below) The beginner should have a hacksaw such as the Challenger (top), a stiffback or miter saw for cutting stock for recoil pad installation (center) and a good jewelers saw for fine work on sights, inlays, other chores.



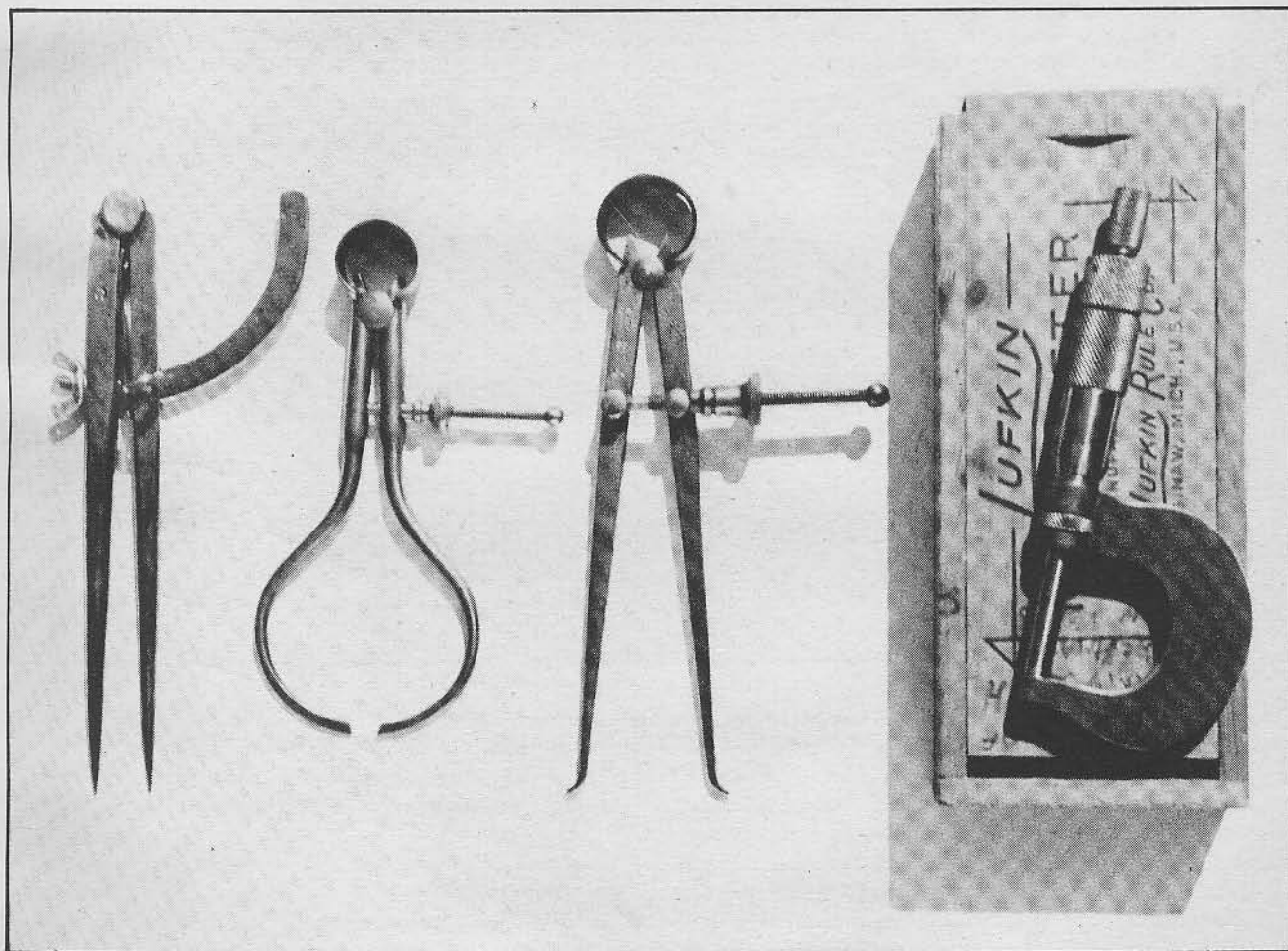
other must for the home craftsman. Keep them sharp and they will do their job properly. A dull chisel is worthless. With your sharp chisels, I suggest you keep a full box of Band-aids on the bench, just in case!

A serious home gunsmith never will have enough files. As a start, he should have on hand several sizes of screw head files. These are used primarily for recutting the slots in screw heads and, used properly, will do a neat, professional job. Recutting a screw slot with a hacksaw is taboo among real craftsmen. Metal checkering files are quite expensive, but when one desires to checker a bolt

handle or hammer spur, they are the only way to go. Swiss needle files are an absolute requirement in any gun shop, professional or amateur, so plan on saving for a complete set of the most popular shapes.

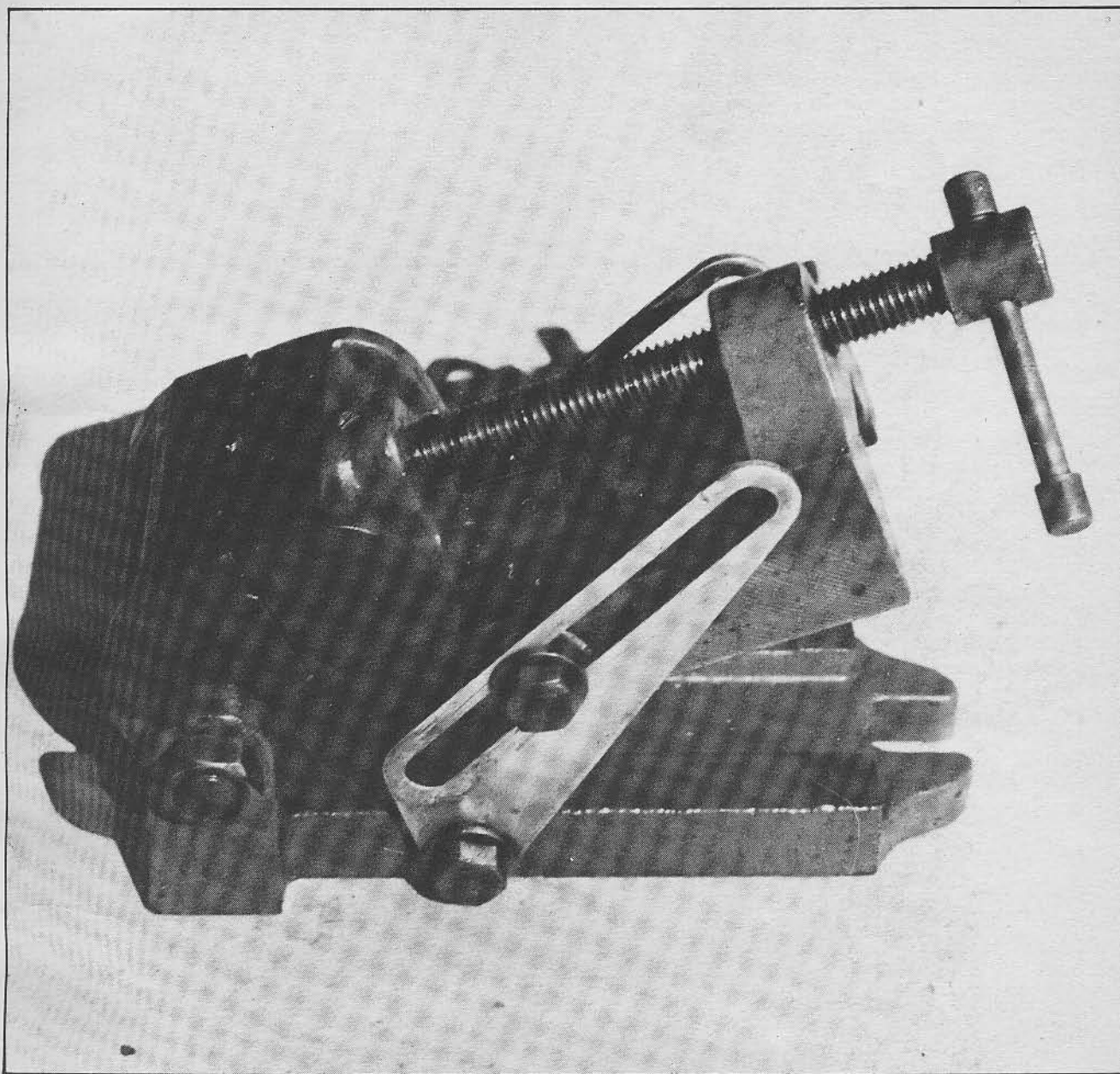
Thorough coverage of the various files and their uses could fill a sizable book in themselves, as there are so many of them, each made for specific purposes. There are sight base files, Barrette files, needle files, bent files, three-square files, crossing files, lathe and mill files, half-rounds, rattails, Pillar, Habilis, squares, mill bastards and knife

Even the novice should have a set of dividers, inside and outside calipers and micrometers, plus knowledge of use.





A set of screw extractors can pay for themselves in saved time in removing a broken or badly burred screw from a fine gun action. There is a variety of makes, but when selecting a set, buy the best and avoid the cheap ones.



In addition to a good swivel-base bench vise, a drill press vise can prove most valuable in that it may be carried from one location in your shop to another with the work in progress still clamped in its jaws for further work.

files and into near infinity. Eventually, one who works with firearms for any length of time will have need for all these files and many more.

In pursuing gun or stock work, one should have on hand a set of inside and outside calipers and a divider, all of good quality. A set of one-inch micrometers wouldn't hurt either.

The list could go on and on concerning tools that are, and might be needed eventually by the beginning gun craftsman but each individual will soon learn what is needed in this exacting profession. Don't go out and purchase a long list of tools just because they might be listed here. Wait until you need them, then when you buy, buy the best quality you can find.