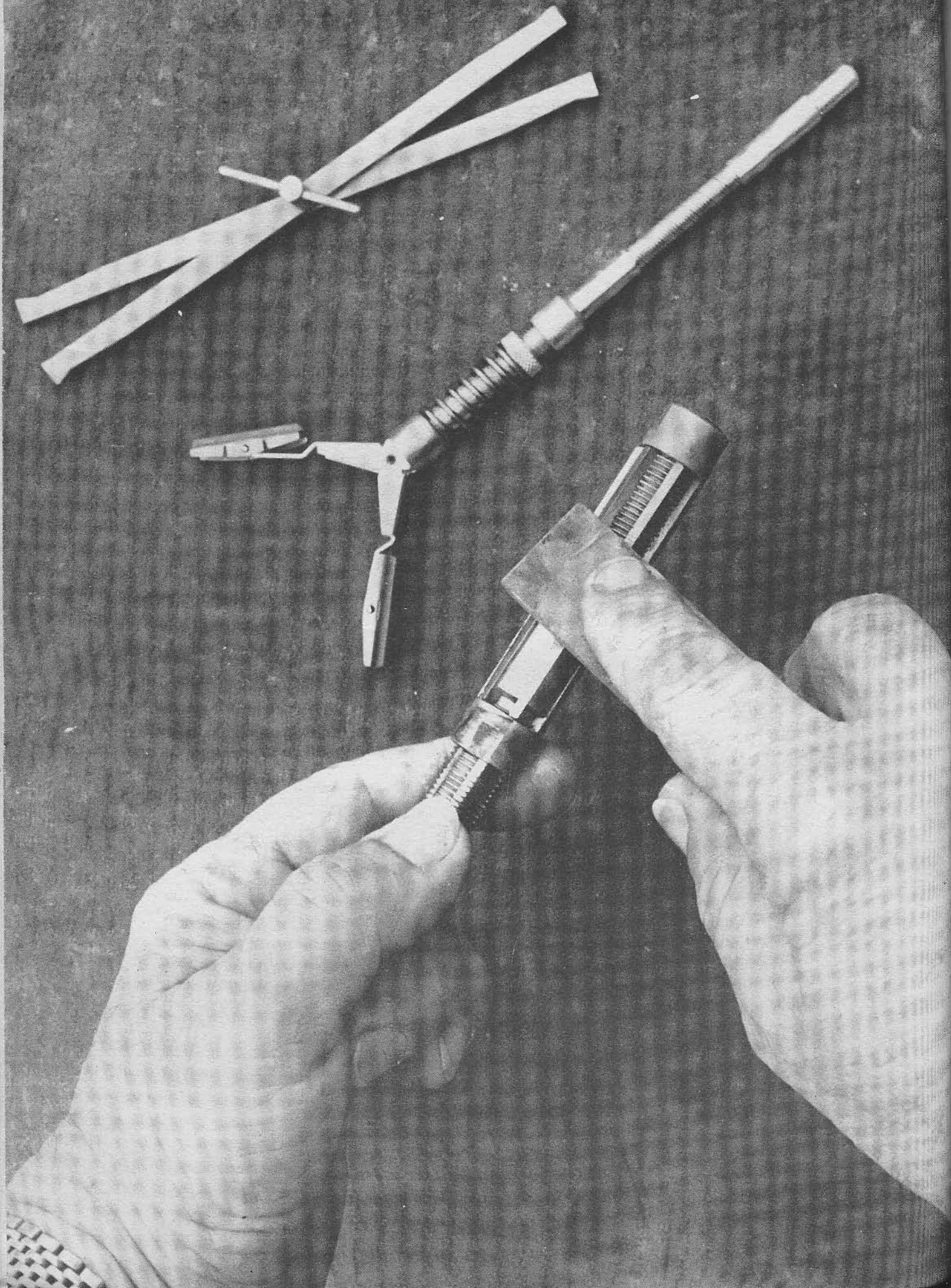




Chapter 24

A CHOICE FOR CHOKES

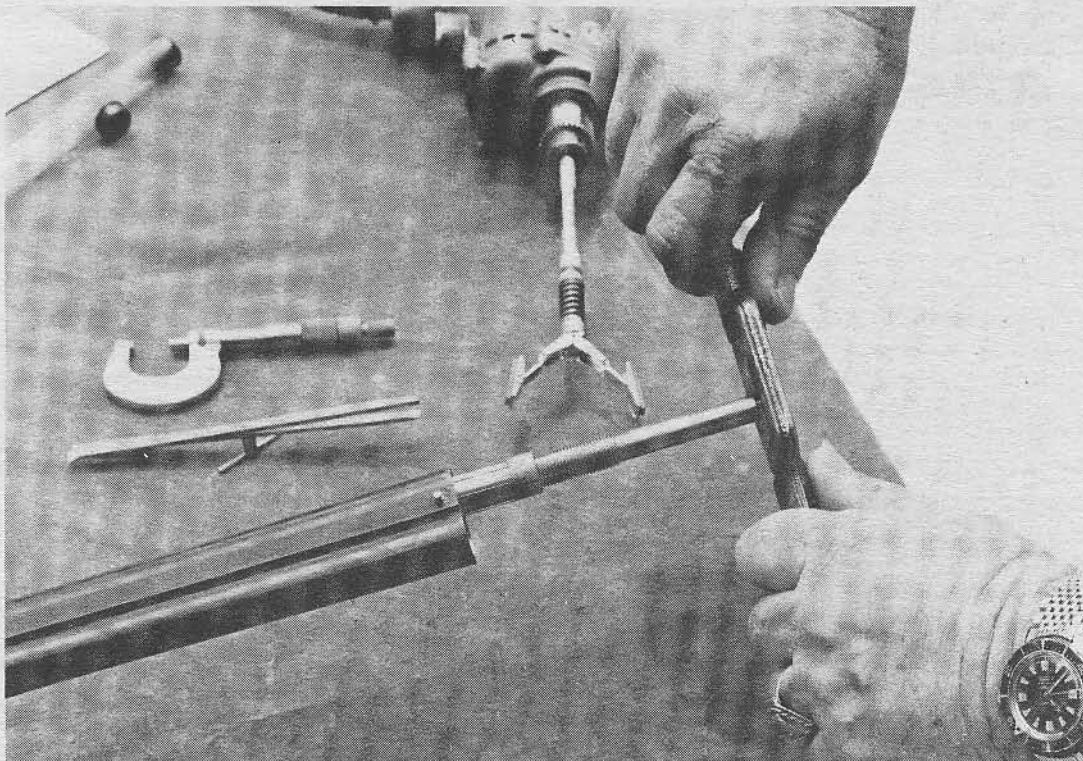
Simple Tools Can Be Used To Change The Choke Of Your Shotgun On The Kitchen Table!

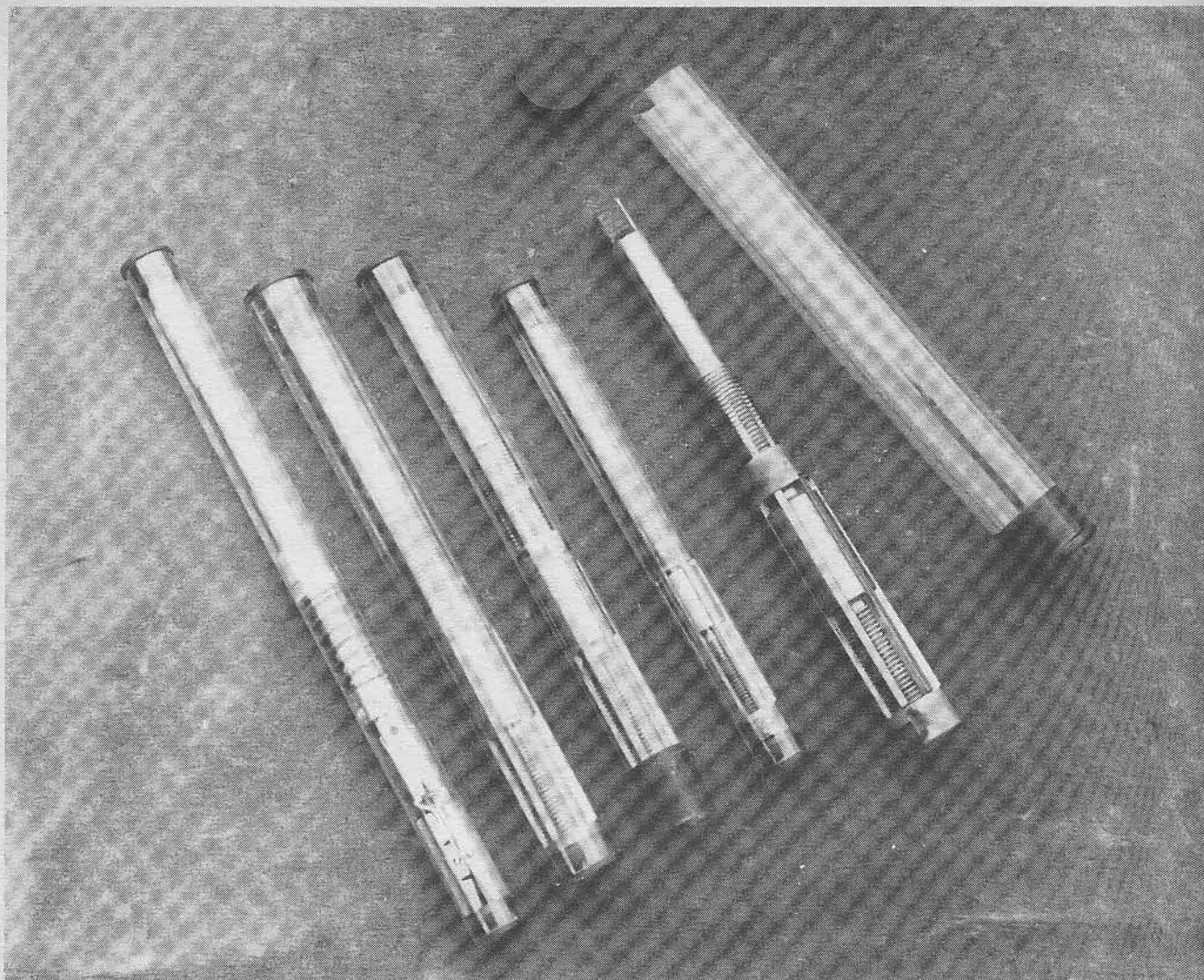
REGARDLESS of how they are used, the words choked, choking, choked up, choked down, choked back and choked off all mean basically the same. Daniel Webster defines these terms as meaning: 1. To strangle; suffocate; smother or stifle. 2. To block up or clog. 3. To hinder the action of and hold back.

All these definitions apply to the situation at hand: owning a shotgun with a nasty habit of shooting like a rifle when a little wider shot spread or cleaner pattern is desired.

Let's take the example of one man who acquired a fine double-barrel that had been designed specifically for trap shooting. He found that while the full choke of the trap gun was capable of getting the job done on game birds, he still

Left: Prior to actual use, the reamer should be honed on an Arkansas stone to assure it has a perfect cutting edge. In a pinch, the reamers can be used with barrel in horizontal position, if care is taken. The final honing operation should be accomplished, however, with barrel secure in a vise.





The best means of storing edged tools in your box or chest is to place each in a plastic tube after it has been given a preservative coating. (Right) The correct and safest way to assure a perfect job is to place the shotgun barrel in a bench vise in the perpendicular position, then run the reamer straight down the bore.

had to aim the thing like a rifle to hit anything with it. The shot spread out to forty yards or so was so concentrated that rifle-like aiming was mandatory.

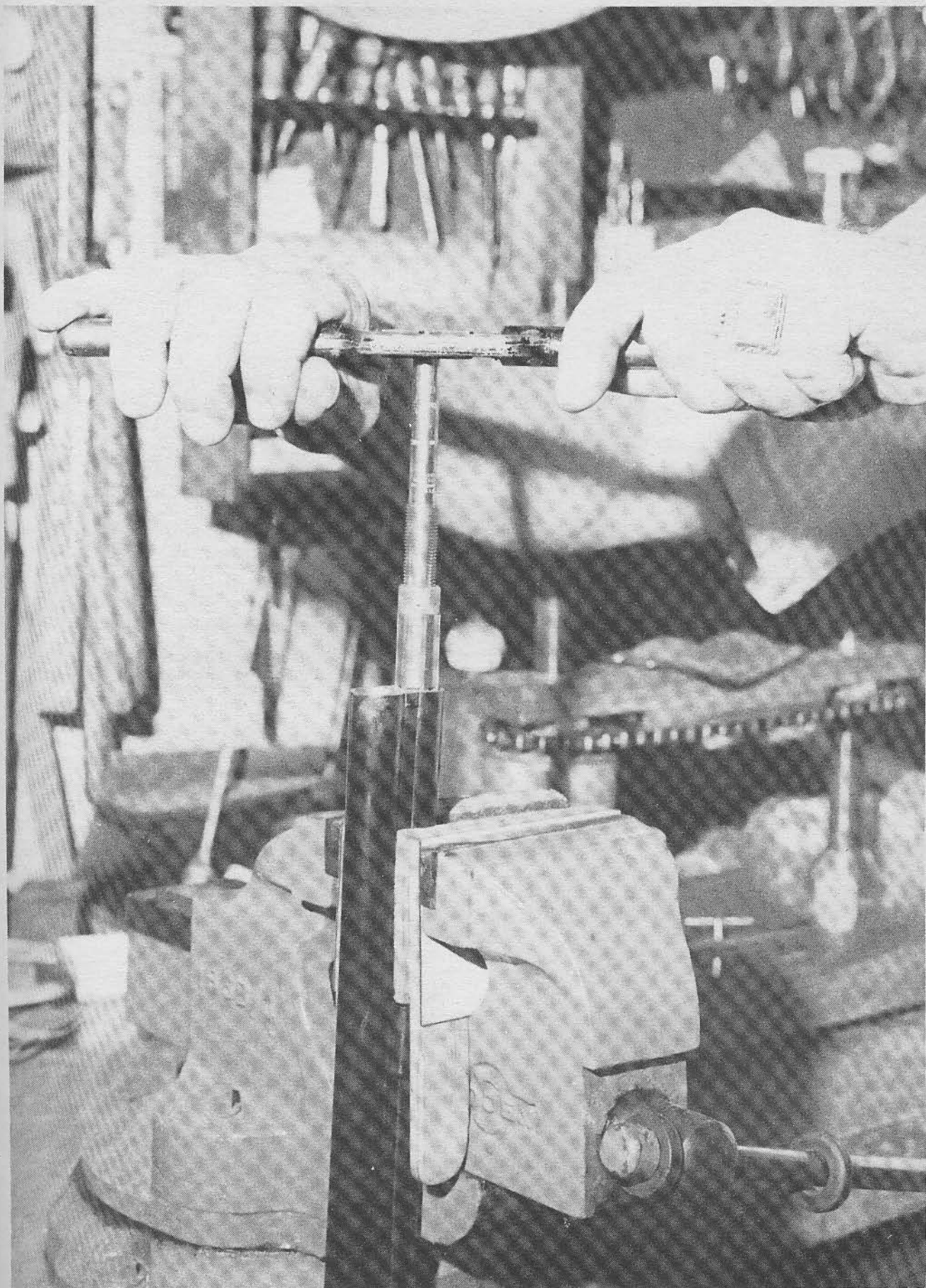
In desperation, he took this fine shotgun to a competent gunsmith, who opened up that extreme full choke to throw a wider pattern. Following this treatment, the owner found he was losing far less birds than before due to the improved shot pattern of the opened-up choke.

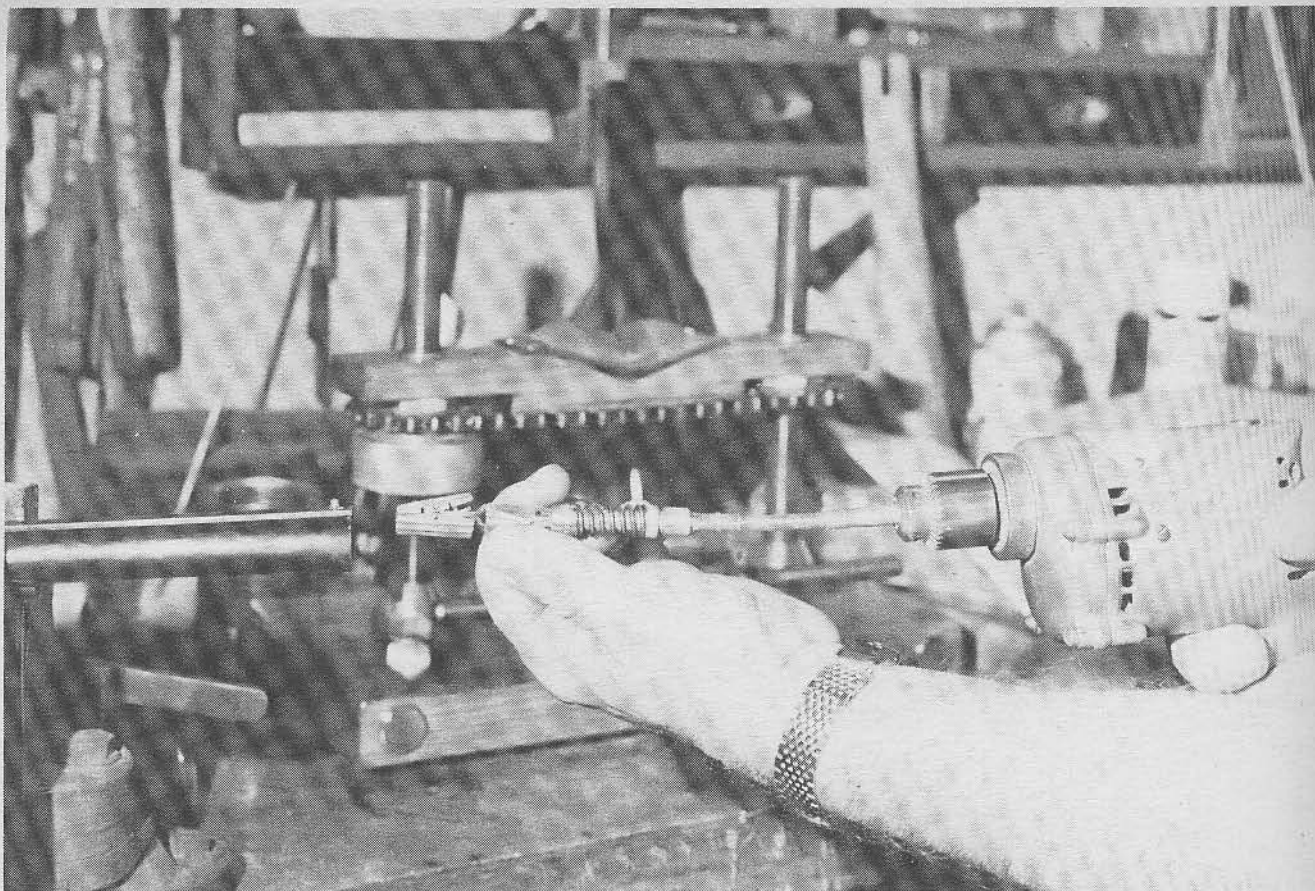
In the past, the tedious job of altering any shotgun choke — and doing it properly — was one best left to a competent gunsmith; one especially well versed in the fine art of shotgun barrel work. However, Brownell's Gunsmithing Supplies of Montezuma, Iowa, now has available a set of

tools so advanced in design that they can be used in choking situations by the gun owner himself.

This does not mean that every Tom, Dick and Harry should rush out and purchase a set of these tools for the purpose of altering their fine Parker A-1 Special or L.C. Smith trap-grade shotguns. It does mean that any man with a reasonable knowledge of shotgun bores, infinite patience and some know-how in the use of precision tools, not to mention regard for his guns, can open up a super-tight choke to throw an improved pattern in as little as twenty minutes.

Opening up any choked shotgun tube involves two basic adjustments. The hunter's adjustment will be com-





Once the choke has been reamed to specifications, the hone is placed in a drill motor, then spring-loaded stones are inserted in the bore to polish. Author has found that use of a lubricating oil will speed process.

paratively simple in that he will want his barrel choked from full to improved modified or some other straight-forward boring. Too, most hunters will use standard factory ammunition.

On the other hand, the claybird shooter probably will want the choke opened up just a trifle to give a slightly enlarged shot pattern. This, most generally, is with his special breed of handloaded shotshells.

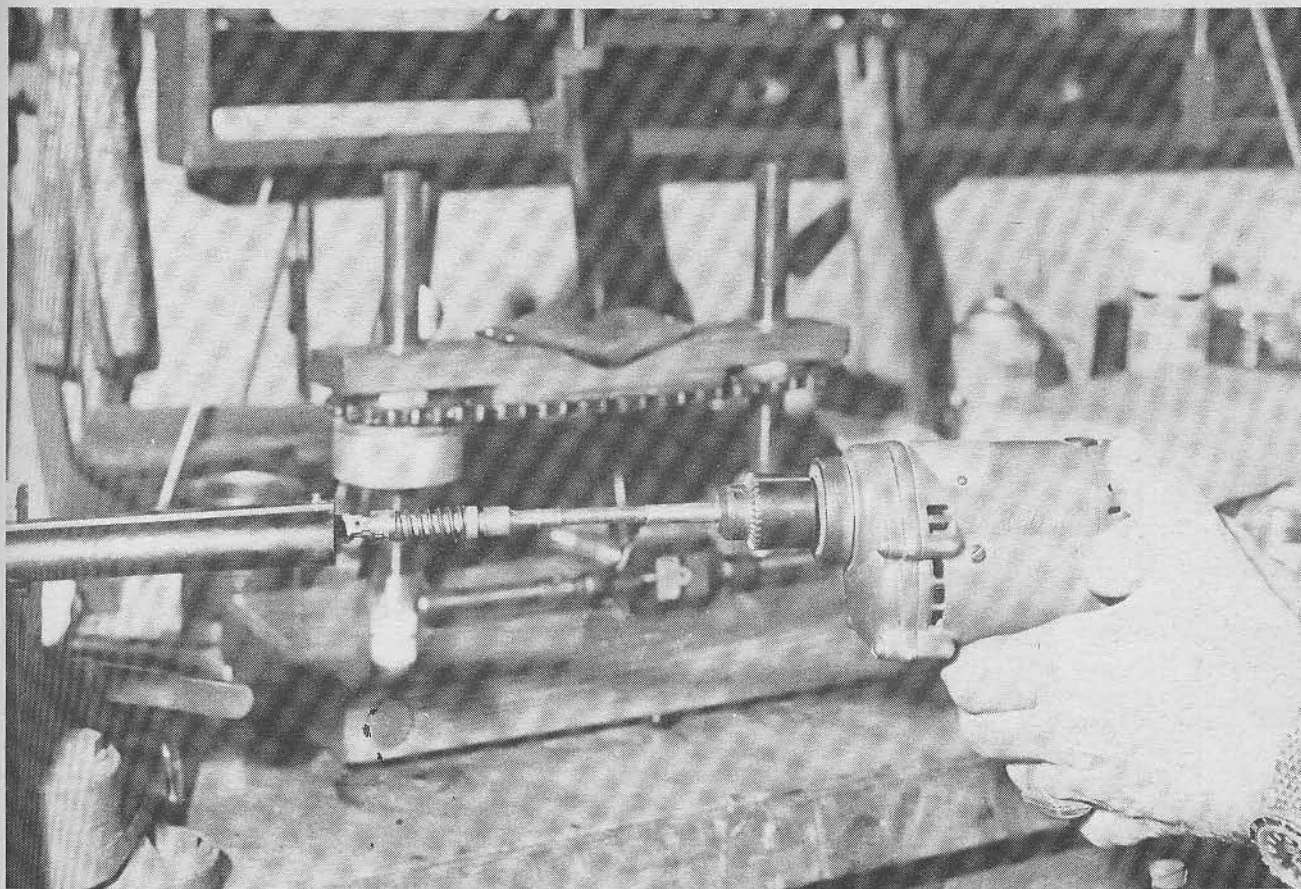
The tools mentioned consist of special-angle blade choke reamers in appropriate sizes to fit 28-, 20-, 16- and 12-gauge shotguns.

Also needed for a perfect job will be an adjustable barrel hone with flexible drive for a one-fourth-inch electric drill and one of the new barrel comparison calipers. The four reamers listed as well as the barrel hone and caliper will handle any choke requirements from cylinder bore in the 12-gauge on through the full choke of a 28-gauge. Only one of these reamers is required for each gun. The complete

outfit, including the barrel hone, calipers and reamers, is available from Brownell's.

The actual working dimensions of each reamer will exceed factory maximum/minimum specifications slightly. The angled blades of these reamers provide a perfectly flat slicing cut at all diameters. The blades remain absolutely true at all sizes and adjustments and do not bulge or curve, thus assuring proper bore configuration. As with most reamers, the cutting edges of each blade should be honed with an Arkansas stone for best performance. If you do not know how to handle this sharpening, seek professional help.

Prior to beginning the job, the barrel should be removed from the action. If this is not possible, precautions must be taken to assure that no metal cuttings drop into the action during the reaming operation. I have found that by inserting a tight-fitting patch or patches about six inches down the bore, the possibility of this is eliminated to a great



In actual use, the hone is worked slowly back and forth in the bore to assure entire reamed section is polished.

extent. When the reaming operations are completed, the patches are pushed out the muzzle from the opposite end of the barrel, thus clearing all cuttings from the barrel.

The barrel is placed in a padded bench vise in a vertical position, muzzle toward the ceiling and about waist high. This is important, as cutting with the barrel in a horizontal position has a tendency to remove more metal from the bottom due to the weight of the reamer.

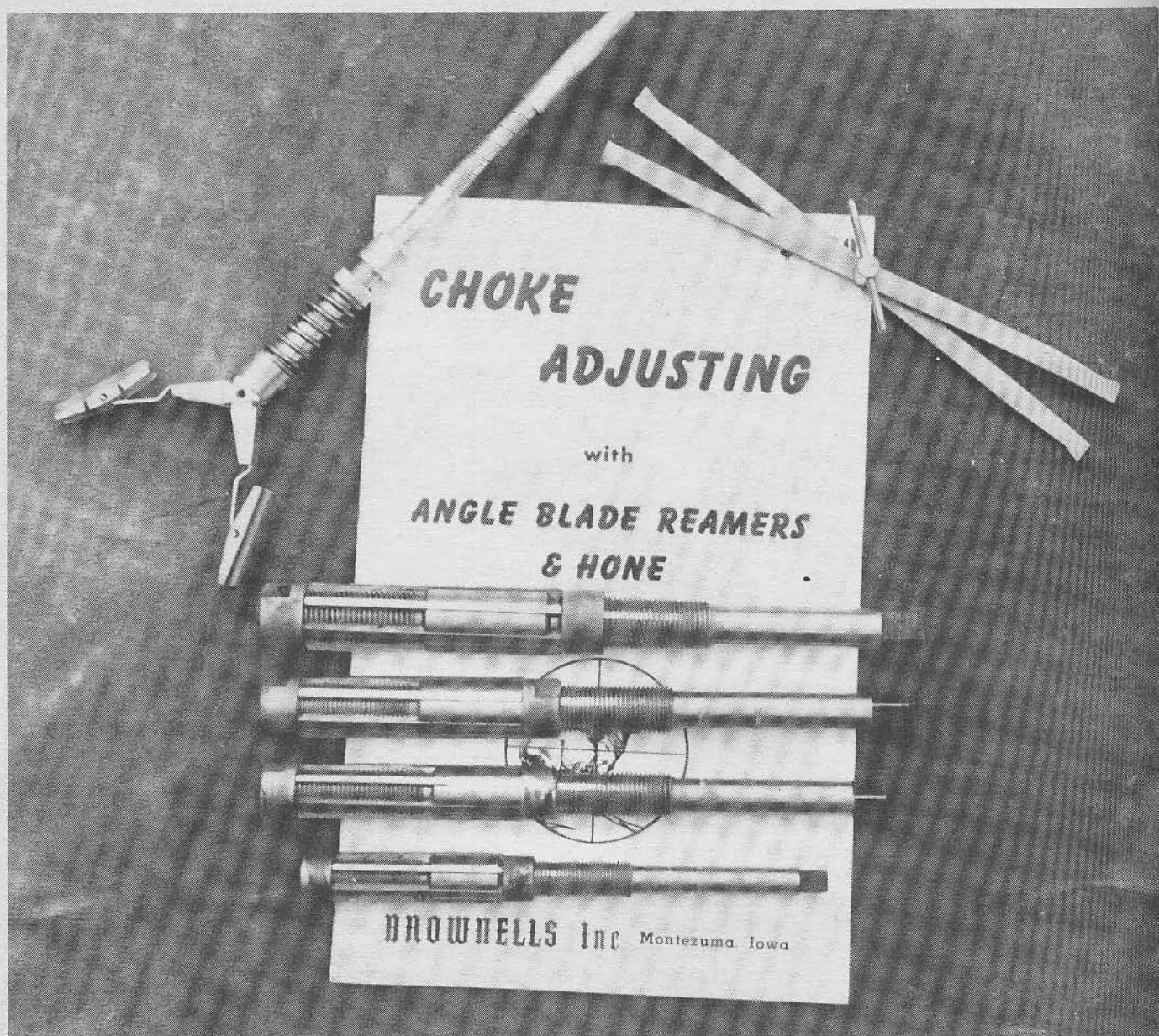
Let's assume that we are doing a 12-gauge and using the No. E 12-gauge reamer. Adjust the reamer by backing off the rear adjustment nut half a turn maximum at a time and tightening the front adjustment nut. Adjust the reamer a small amount at a time in this manner, until it just touches the sides of the choke. Apply cutting oil and make the first cut by rotating the reamer — now held in a tap wrench — in a clockwise direction allowing the weight of the reamer and wrench alone to furnish the pressure. When the reamer has cut its full length, continue rotating in the same direction

and, at the same time, slowly withdraw it from the barrel.

Brush the reamer and clean the chips from the bore. The bore now should be measured with the calipers and, if necessary, make another cut if additional metal is to be removed. It is best to test fire the gun occasionally during the reaming operation, using the loads normally shot in the gun to assure the correct percentage at a given yardage.

When the correct pattern is achieved, the final .001-inch should be removed with the hone to assure a satiny sheen and glassy smoothness to the reamed area.

The adjustments of the reamer are gauged by the flats on the adjusting nuts. Position this flat between two of the blades on the cutter for the initial cut. For each additional cut, the reamer is removed from the choke as outlined above, the adjusting nut is moved to the next setting located between the next two blades. The second cut will remove .002-inch from the choke diameter.



The Brownell choke adjusting kit is available in four gauges: 28, 20, 16 and 12. Each of the angle-blade reamers is capable of doing a perfect job if used correctly and with care. The furnished hone and calipers are necessary.

The barrel comparison caliper is used to measure the amount of metal removed from the choke by the reamer. One end is inserted into the barrel and opened to maximum. The screw lock is tightened, then the opposite end of the caliper may be miked from the information needed. While these calipers may appear simple in construction, they are extremely difficult to manufacture and are capable of measurements within a plus-minus of .002-inch. This is overly sufficient when bore diameters of various makes of shotguns vary so greatly.

As with most things new in the gunsmithing line, I like to find out the potential for myself. My initial experience with the tools just described began with a muzzleloading shotgun from the Dixie Gun Works of Union City, Tennessee.

On the first hunt with this gun, I found the shot was choked so tightly that the spread couldn't have been much over a foot or so at about forty yards. This meant that I had to handle this gun like a rifle for all my bird shooting. Consequently, I missed far more birds than I bagged.

I found that the No. D 16-gauge reamer was a perfect fit

into the choked muzzle of the old charcoal burner, so I went to work exactly as outlined here. The only difference was that I did the entire job afield sans the niceties of a bench vise or workbench. Two passes through the muzzle of the shotgun and I had a near-perfect thirty-six-inch pattern of shot at about forty yards. This pattern opened up slightly after I had honed the choke to a high polish, but it was still ideal for downing pheasant, chukar and quail at up to sixty yards.

The angle blade choke reamers are simple to use. They do a clean, professional job in a fraction of the time necessary for other tools designed for the same purpose. A complete book of detailed instructions for use of these reamers also is available at \$3 per copy from Brownell's. And if you are capable of close tolerances in handcraftsmanship, an ardent shotgunner who wishes to improve the potential of some of his guns, then one or more of these reamers to fit the various guns you want improved is money well spent.

Like all precision tools, these choke reamers deserve kind treatment. Keep them clean and well oiled during storage.

The hone is simple in design and the spring-loaded stones fit snugly into the bore to polish away possible roughness.

