

Sweatin' Bullets Part II

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Casting Your Own for Fun and Profit



Civil War soldiers would sometimes cast their own bullets using what are known as gang molds to speed up bullet production. These molds had up to eight cavities – on each side! They would load up one side, turn the mold over and fill up the other side, with whole regiments industriously casting as many as 20,000 bullets a day to supply the war effort. The individual bullet maker of today is generally satisfied with molds of one or two cavities. Lyman Corporation sells some specialty steel molds in four and six cavity for metallic cartridge hand-gunners who are active in target shooting and cowboy action shooting and really shoot a lot. Lee Precision markets similar molds, plus an eighteen cavity mold for casting buckshot in 00,000 and #4 buck which will reportedly produce up to 3000 pellets per hour! My molds are of the one and two cavity kind only, and generally I cast between 100 and 500 bullets a session, as needed, dropping them onto a soft old towel to cool so as not to distort them. I seldom spend more than two hours at it, but cast fairly regularly in



summer to keep up a good supply since summer is when I do most of my shooting.

For health reasons, the casting of lead bullets needs to be done in a well-ventilated area, ideally outside. The old timers of yesteryear, being less health-conscious, thought nothing of doing their bullet casting indoors. In his book *Sixguns* that I mentioned in Part I, author Elmer Keith tells of casting bullets on his wife's cast-iron, coal- and wood-burning stove during cold Montana winters. He liked to do his bullet casting indoors in the winter because, as he wrote, "it was too hot to work over a hot stove in summer." He was a smoker, too, of pipes, cigars, and cigarettes, and one can only imagine what the noxious combined odor of burning wood or coal, tobacco smoke, and smoldering lead must have smelled like. His disgruntled hausfrau objected bitterly to his winter bullet-making activities, but he did it anyway. It was home, sweet home in big sky country!

I do most of my bullet casting in the summer behind my house on a picnic table in the shade of a maple tree, with my electric furnace plugged into a long extension cord. On mild winter days I may set up on the back porch if I need to do some casting and may put in an hour or so out there every once in a while.

Knowledgeable bullet casters of today are well aware of the health and safety concerns associated with casting lead bullets. We cast our bullets in well-ventilated areas, preferably outside with the breeze at our backs, or in some other well-ventilated area, with maybe a fan to waft away the unwanted fumes. We wear eye protection. It is a must because molten lead splatters easily and our eyesight is precious. A full face shield gives good protection, but seems clumsy to me; I'm content to wear safety glasses which I feel are more practical. Gloves are optional and can be clumsy too, although they are necessary when cast-





ing with old-style brass molds which have integral metal handles that are too hot to use barehanded.

I score my wooden mold handles lengthwise for a better grip using a Dremel tool (I wonder why the mold manufacturers don't sell 'em that way to begin with). A sturdy work bench or table is needed on which to do the work. Any kind of an awkward or rickety setup is to be strictly avoided in bullet casting to prevent an accident while handling hot equipment and molten lead. And no distractions should be tolerated. Friendly pets and small children in the area can easily lead to disaster.

As with any activity, familiarity tends to breed carelessness and we need to be on guard against it. Be careful when adding more lead to a pot of molten metal. Poorly cast bullets and excess lead sliced off from the mold by the sprue cutter should be carefully added to the pot with a ladle, not dropped in which usually causes the lead to splatter. As stated earlier I like to do my bullet casting in the great outdoors – just so long as there is no chance of a rain shower. Even one drop of water will cause molten lead to “explode” out of the pot as the water droplet instantly bursts into steam. And that also goes for spittle from a sneeze and the sweat off one's forehead. I work at arm's length, wear a hat or a sweat band, and don't hover near or over my production pot with molten lead in it, lest the perspiration off my forehead produces explosive results and ruins my whole day!

And lastly, when finished casting bullets and after putting everything away it's wise to give the hands a good scrubbing

with soap and water. Fried chicken is finger lickin' good, but lead is toxic!

Love Your Bullet Molds

Currently I'm feeding my home-cast lead bullets to sixteen guns in a half-dozen different calibers, including twelve muzzleloading black powder guns in calibers .36, .44, .50 and .54 (besides casting slugs for my six new-fangled smokeless powder type metallic cartridge guns). I use nine different bullet molds in my work, some of which I've had for 30 years or more; with proper care they will probably last me until doomsday.

To start with, new bullet molds need to be cleaned to remove any grease or oil that may leave an undesirable baked on residue. I use mineral spirits or isopropyl alcohol; carbon tetrachloride or white gas works too. Then I lubricate the locating pins and, most importantly, the pivot points on bullet molds before using them for the first time using bee's wax or a high temperature anti-seize lubricant to prevent galling. I use Permatex brand which I get from a local auto-parts store. Also, always smoke the bullet cavities before using the mold for the first time. Smoke the bullet cavities using a wooden match or a candle. Smoking the cavities adds a micro film to them so they will fill up completely with hot lead and then release the bullets without having to whack the mold much. Bullets usually just fall out when the mold is opened, or else a gentle tap on the mold hinge is all that's needed. I re-smoke the molds again every once in a while especially if the slugs



or balls are sticking in the mold cavities.

Mold care is easiest for aluminum molds, if you don't get too heavy-handed when knocking off the bullet sprues which can bend the sprue plates. Prep all molds, whether steel or aluminum, the same way. Steel molds, however, need a little more attention because they are prone to rust and so should be stored well-greased or oiled after use, then degreased before using again. The preceding is not just pettifogging details, but essential steps for mold care that will in-

sure their usefulness for a long, long time.

Bullets that don't readily fall out of the molds, whether aluminum or steel, should be knocked out by gently striking the hinge pin with a wooden dowel or a plastic mallet, and never dig them out with a knife or other sharp instrument which can scratch the bullet cavity and ruin the mold; then smoke the

bullet cavities some more. Lyman Corp. does sell rebuild kits for their pricey steel molds and Lee Precision sells parts for their economical aluminum molds.

When the lead in the pot turns blue and the bullets come out frosted, the lead is too hot. Turn the temperature of the melting pot down a few degrees. Keep the mold and ladle at the correct melting temperature by laying the mold on the rim of the production pot while adding more lead; same with the ladle.

For the occasional shooter, say, someone who buys 20 or 40 or so slugs a year with which to sight in his gun in the fall to hunt deer for two weeks after which Ol' Betsy is then cleaned and stashed away in a gun cabinet for the rest of the year, there's obviously no sense in spending a hundred dollars to buy a bullet casting setup. If you enjoy shooting regularly though, bullet casting is definitely a logical and cost effective way to go and, for the fanatics who shoot a lot (paper punchers, cowboy action shooters, et al.) it is essential, and for them there is the modern equivalent to the 19th century gang molds, the Lee Precision six cavity commercial quality molds, available in a few choice calibers. And the company will make any custom designed bullet mold you want – for a price!

Truth is – casting bullets is fascinating, satisfying, and fun, as well as being a cost effective and even a profitable part of the sport of shooting black powder muzzleloading firearms. It's a fairly uncomplicated business and a part of the shooting game that I've enjoyed for many years. I recommend it to all who like to burn powder and put lead down range. **MB**

