

# Silversmithing Tools

by Dave Smith

The following tools, with descriptions, are the minimum necessary for the creation of simple Jewelry of many styles of Sterling Silver and Gold jewelry including the style of “American Southwest” or “American Indiana”. As your skill level increases you should expect to add more tools that are specialized for specific tasks.

<p><b>1. Propane torch:</b> These are two propane torch tips or heads. If you look closely you will see that the width of the nozzle on the top is larger than the bottom. This will produce a wider and hotter flame. Larger jewelry pieces may require a larger tip. Using both tips may be necessary to bring larger pieces up to temperature faster.</p> <p>These heads are screwed onto a disposable propane cylinder. They are lit with a striker or cigarette lighter.</p> <p><b>Safety note:</b> <i>You should never set the torch down or stand it up while it is lit. Always shut it off when not in immediate use.</i></p>	
<p><b>2. Butane Torch – compact:</b> This torch is my preferred tool it will decrease fatigue because it is light weight. Its compact size and internal design allow a greater range of angle when applying flame to your pieces. The best one we have found is distributed by SilverSmithingClassSupplies.com. This is not a cream bur lee torch. Its high temperature range is 2400 degrees Fahrenheit. <b>Safety note:</b> <i>You should never set the torch down or stand it up while it is lit. Always shut it off when not in immediate use.</i></p>	
<p><b>3. Striker:</b> The striker is a flint and steel spring device that creates sparks to light your torch. It is safer to work with than a cigarette lighter because it has no storage of flammable fuel. It is operated by quickly squeezing the handle. The flint is replaceable when spent. A small cigarette lighter may be used in place of striker. Extra care should be taken so that the torch flame never touches any part of the lighter body.</p>	

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<p>4. <b>Charcoal Block and SolderNBlock™ Tile:</b> The charcoal block is a working surface that your work is heated on. It burns slowly as you heat your piece and creates a reducing atmosphere that reduces the amount of fire scale that is produced when you heat your metal. The Solderlite tile used below the charcoal block helps prevent slag for burning the surface you are working on. You can also solder on it but you will not get the reducing effects of using charcoal. Wrap your block with a piece of wire to help prevent it from splitting. I prefer the SolderNBlock™ Lazy Sue, It keeps you from having to point the torch back at yourself while soldering.</p>	
<p>5. <b>Tweezers – self closing:</b> These tweezers are used to position materials and hold bails and irregular parts when soldering. It may be necessary to dress the holding faces with a file occasionally. They also have wooden handles to insulate your fingers from the heat.</p>	
<p>6. <b>Pickle:</b> Pickle is used to remove fire scale, flux and surface discoloration on your metal. Pickle is made up of Sodium Bisulfate that is mixed with water to create a concentrated solution of sulfuric acid. Approximately one fourth of an inch of powder is added to four inches of water, stirring slowly without splashing until fully absorbed into solution.</p> <p><b>Safety note:</b> <i>When mixing always add the powder to water, never add water to powder because a violent reaction will take place and splatter acid on you. You should always use copper tongs to pick objects from the Pickle, never your fingers. Pickle should not be transported in liquid form. Read all Material Data Safety Information and understand it before using,</i></p>	
<p>7. <b>Copper Tongs:</b> These tongs are a large tweezers that are used to place and remove objects from Pickle. Rinse with water after each time the tongs are dipped into the pickle.</p>	

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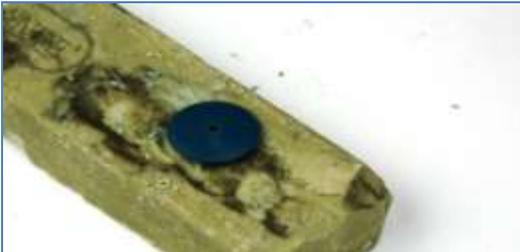
<p>8. <b>Shears:</b> Also called Ten Snips are used to cut Silver sheet, trim excess metal from projects and cut sheet solder into useable pieces. If not used carefully they can deform the metal you are cutting. Six inch and smaller are best for working around Bezels and Cabochons.</p>	
<p>9. <b>Flux:</b> Aquaflux by Eurotool™ is my preferred brand. It is a spray form of Borax flux.</p> <p><b>Safety note:</b> Avoid contact with skin, wash off with water immediately. Read all Material Data Safety Information and understand it before using,</p>	
<p>10. <b>Spray Bottle:</b> A misting sprayer should be used to apply flux, it is faster to apply than paste flux. I found the ideal bottle at Wal-Mart in the cosmetics section for about \$1.00 each.</p> <p><b>Safety note:</b> Be sure to note direction of the spray nozzle before spraying flux onto working piece.</p>	
<p>11.</p>	
<p>12. <b>Pens &amp; Pencils:</b> Permanent felt ultra light are great for marking silver and solder. Initial layout with pencil works well if metal is clean and free of oil. The felt pen ink burns off with flame.</p>	
<p>13. <b>Chain nose pliers:</b> These pliers have a totally flat faces on both jaws, no serrations like on a common needle nose pliers. Even with the flat jaws they can still damage wire if you squeeze to hard. Many people dip the jaws in latex paint to put a rubber like surface on the jaw to help avoid tool marks.</p>	

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<p><b>14. Round Nose Pliers:</b> Making loops for earrings, findings, clasps, and bending right angle corners are easy work with these pliers. Varying where you start the loop determines the diameter of the loop. As with most wire working tools you hold the wire with the pliers while you manipulate the wire with your fingers.</p>		
<p><b>15. Side Cutters or Dikes:</b> Side cutters are used to cut wire and bar into smaller pieces. You may need to use file to square wire or bar ends after cutting. I also use these to remove loops, tangs and spurs from cast charms and findings prior to filing, Flush cutters are also an option when you want a clean cut on one end of the bar or wire,</p>		
<p><b>16. Mill File:</b> Mill or Bastard file is a file that cuts in only one direction, if you look closely at the file planes they are aligned in one direction only. The file is pushed away from your body against the work piece and cut in one direction only. I prefer the 10 inch version.</p>		
<p><b>17. Small files:</b> I like a small set of files that have various shapes. Round, triangular, half round and oval help you get into very small and unusual shaped places.</p>		
<p><b>18. Titanium Pick -Positioning Tool:</b> This is a tool that is used to move metal into place and to reposition parts of your assemblies when they are hot. Very good for nudging parts around to position them.</p>		
<p><b>19. Steel Anvil or Chasing Block:</b> This is a striking surface that work is placed upon to form flat, curved and triangular shapes. Care should be used to avoid hitting the anvil directly with your hammer because it may cause permanent marks in the surface which will transfer to your work. Strike the metal being worked, not the anvil.</p>		

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<p><b>20. Chasing Hammer:</b> Round on one end and flat on the other this common hammer is used to flatten, dent, mark and bend metal.</p>	
<p><b>21. Plastic Hammer:</b> The purpose of this hammer is to bend and form metal without leaving marks on the material.</p>	
<p><b>22. Ring Mandrel:</b> The mandrel is available in several sizes and shapes. Round, oval, square and hex are common. It is used to size rings, make hoops, jump rings and provides a surface to hammer against. Size 1 to 15 is the most common but 1/8 to 1/2 is helpful for jump rings and small rings</p>	
<p><b>23. Flex Shaft motor:</b> The tool displayed is a Dremel with a flex shaft and 1/8 in chuck. The chuck holds an arbor that supports the polishing wheels. Many types and brands are available a variable speed design is necessary. Most cordless tools are not adequate due to low power and the short length of time they stay charged</p>	
<p><b>24. Rough polish with Blue polish wheel:</b> A rough grit polish is used for the first pass to remove major scratches and excess materials. Safety tip use mask and face shield and read Material Safety Data Sheet</p>	
<p><b>25. Fine polish with yellow wheel:</b> The final polish is applied with a fine grit polish. Safety tip use mask and face shield and read Material Safety Data Sheet</p>	

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<p><b>26. Polish wheels:</b> These wheels are used with replaceable mandrel or screw mandrel.</p>	
<p><b>27. Jewelers saw and Jump ring block: (optional)</b> The Jewelry saw is used to cut metal and wire. The Jump Ring Block assists when cutting jump rings by holding the coil against a fixed plate.</p>	
<p><b>28. Spider Hold Down™:</b> This tool is great for positioning, bails, flowers, unusually shaped embellishments.</p>	