

Bean Casting

or

Start Your Own Jewelry Business for Less Than \$100.00

by Don Norris

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Let's Get Started

You can start your own jewelry business by starting out with very little equipment! Bean casting is a method that can be used to create very unusual creations that can be used for jewelry. Bean casting is not much more than just pouring a metal that has been melted into a can of beans. The metal flows in and around the beans and "freezes" into shapes created by the spaces between the beans. However, even though it is a very simple method, there are some steps that should be taken to improve the castings and insure the safety of the caster.

You will need the following supplies to be successful at casting and making a piece of jewelry with Bean Casting.

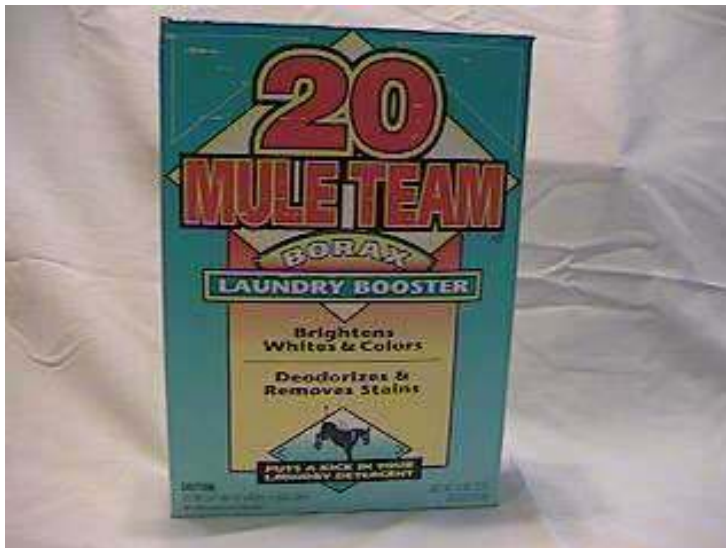
Casting Supplies and Tools



- \$1.00 A bag of pinto beans, small navy beans, or black-eyed peas.
- \$0.00 Scrap piece of 2 x 4 block about six inches long. Most lumber yards will just give you a scrap piece.



- \$0.00 Empty soup can for holding the beans during casting.
- \$2.50 Borax for cleaning the molten silver. This will be a large box that will last you and 100 other bean caster a life time.



- \$10.00 Propane Torch purchased from a hardware store.



- \$0.00 Glass of water. It can be paper or plastic cup and is used for a fire extinguisher.
- \$7.00 One ounce of sterling silver shot or scrap.



- \$1.00 Lighter.

Polishing and Finishing Supplies and Tools

- \$35.00 Dremel rotary tool from Target, Sears, Walmart, or Kmart.

- \$3.00 White Diamond buffing compound, rough first polish. (Rio Grande Co.)
- \$3.00 Zam buffing compound for a finish polish. (Rio Grande Co.)
- \$1.00 Drill bit (1/16). Hardware store
- \$2.00 Sterling silver round wire for jump rings (18 gauge). (Rio Grande Co.)
- \$4.50 Large round ball burr. (Rio Grande Co.)



- \$4.00 Wire cutters from Walmart.
- \$14.00 Ten 20" Chains (Rio Grande Co.). 632-250/20

Total: \$88.00

Lets start your business!

Step One: Make your crucible.

Use the ball burr to carve out a small "bowl" in one end of the 2 x 4 block of wood.



Step Two: Carve a pour spout.

Use the ball burr to carve out a "pour spout" from the bowl to the edge of the 2 x 4. Your crucible is finished!



Step Three: Divide silver in to smaller portions.

Your silver into two, three or even four equal groups. This will make it easier and quicker to melt and cast.



Step Four: Place one portion into the bowl of the "crucible".



Step Five: Learn to Light the Torch.

First let me show you how to light a lighter correctly for lighting the torch. Hold the lighter so that your thumb rolls the striking wheel to the side of the thumb.



Do not use the tip of your thumb. This will hurt your thumb, and it may touch the hot metal part of the lighter while you are lighting the torch. Ouch!

Lighting the torch is easy if you do it right. Do it wrong and it scares you, your neighbour, and your teacher! Follow these steps and you will never be afraid of lighting a torch again.

1. Light the lighter.
2. Place the lit lighter directly under the torch's tip.



3. Slowly turn on the torch very slowly. If you do not know which way to turn the knob to turn on the torch, follow these instructions: Without trying to light the torch, turn the knob both directions, until you can hear the gas come out. Do this several times until you know which way to turn it on. No, it will not fill the room with gas and blow you up, and no, it will not gas you and kill you. The whole tank could empty in to an average room and not blow up or gas you. It will, however, stink. Now, back to the steps.
4. While you are turning the torch on with the lighter under the nozzle, a small fluffy flame will appear first. Leave the lighter on, and keep turning on the torch slowly, until this small fluffy flames "jumps" down into the torch and comes back up as a sharp, short flame. The torch is now lit. The next step is to adjust it to flame about 1 1/2 inch long.



Step 6: Prepare the Beans for Casting.

Fill an empty soup can with beans, rice, pasta, or other natural objects of your choice. Fill the can up to about 1/2 inch from the top.



Note: I have tried casting with the beans dry and with the beans covered in water. I found that I liked the results of the dry beans better. The castings seem to have a more interesting shape with the beans being dry. It does really smoke and stink

for a while, so plan for it if you decide to cast dry. I would recommend that you try both ways.

If you decide to use water, fill the can with water until the beans are just covered with a little water. I tried about 1/8 of an inch. It worked fine, but I felt the water cooled the silver too quickly to make as interesting of a casting as when I tried it dry.

Step Seven: Get Ready To Cast.

Prepare to cast by choosing where you going to cast. I do not recommend that you do this in your living room or kitchen. Your bedroom is much more comfortable. NO, no, just kidding. I would not recommend bean casting in your house at all! You should always use a friend's house. NO, no, just kidding! Because of the fire and smoke caused by the burning 2x4 and the smell of the burning beans, I would cast either in a shop area, garage, or outdoors. There is also the very likely chance that you could spill the silver, and it will instantly burn large holes in carpet or linoleum.

Safely Note: Be sure to make sure your fire extinguisher is charged. To do this, take a plastic cup, fill it with water, and keep it handy. Also, you should wear goggles or eye protection. (Actually, I recommend that you prepare to cast by doing the following: Put on an athletic cup, knee pads, elbow pads, back brace, lifting belt and body armor. Then cover all this and yourself with tin foil, especially the top of your head. Then put on one of those fire fighting suits (you know the ones that used to be made of asbestos until we found that it hunts us down and attacks us.) Put in ear plugs, followed by those ear protector muffs, and a helmet. Protect your hands with welding gloves, and put on steel-toed shoes. Put on light filter glasses followed by goggles. Be sure to put on the best air filtering mask that you can find, and hook an oxygen mask to that. Be very careful with the oxygen--we are going to use a torch you know. Oh, the tin foil is so that you can be detected by aliens as you cast. (They are always trying to steal this technology.) Final warning: if you do something stupid, you can injure yourself, burn down your neighbour's house and your own, kill the dog, and/or start a small world war. There! I think I have now covered my tail as far as safety. I hope so! Proceed at your own risk!

I chose a place in a small personal shop that I built beside my house. I set up everything on a metal chair, more to make it easier to take photos than because of safety issues. From top

left clockwise: I set up the fire extinguisher (white cup filled with water), small paper cup with a little borax in it for fluxing, torch, 2x4 with silver in hollowed out part, and the can of beans (the mold).



Step Eight: Light the torch.

Step Nine: Adjust the Flame Length.

You will need a flame about 1 1/2 inches long.



Step Ten: Begin to Melt the Silver.

Hold the torch so that the small blue flame is placed just above the silver. The point of the small blue flame is the hottest part

of the flame. If it is too far away from the silver, it will take too long to cast. If held too close, it will actually cool the silver. The flame should be pointed at about a 45 degree angle. If it is pointed down at too sharp of an angle, it could blow itself out.



The 2x4 will begin to burn a little, but not as much as you might think. I was surprised at how little. I was concerned about the possibility of moisture in the wood. I feared that it might come out as steam and splatter the molten metal, so as I heated the silver, I was a little afraid the first time. I have used this method about five times with new wood each time to be sure of the safety, and to take the photos for this class. I had no problems, as the torch heated the wood, I saw no steam or moisture. I would recommend that you make sure this wood is dry before you start.

Step Eleven: Flux the Metal.

If you are using scrap or dirty silver, take a pinch of borax and sprinkle it over the silver. I used just the borax that you can purchase at the grocery store for about \$2.50 for a big box. The borax will "clean" the dirt off the molten silver. Quickly take the torch off the molten silver and then quickly put it on again. This causes the flux to collect on the sides of the puddle of molten silver, carrying the dirt with it.



Step Twelve: Cast.

Grab the other end of the 2x4 with your right hand if you are right handed. The torch should be in your left hand. Carefully position the 2x4 over the can of beans. Keep the torch on the silver until you pour it. You may want to experiment with how fast you pour. Different strategies will produce different results. Try pouring all the silver in one area, or pour it in a circular motion to spread it out a little.



Step Thirteen: Put out beans with fire extinguisher!

If you are using dry beans they will begin to smoke quickly and profusely.

Warning: It STINKS! So, grab the fire extinguisher (cup of water) and fill the can with water quickly! Your clothes could even smell like burnt beans if you do not. (This smoke could effect your tin foil underwear, also, making it possible for the aliens to detect you!) Also, put out any flames on the 2x4. If you are not going to use it again, pour water on it to put out any embers that could still be glowing. If you are not going to use it again right away, soak it in a bucket of water or in the sink. Make sure it cannot start burning again and place it somewhere that it will be safe if it does. Inside your charcoal grill would be a great place. A day or so later you can throw it away or use it again.



Step Fourteen: Pour the Beans Into a Bowl and Find Your Bean Casting!

Empty your can of beans into a container and search through the beans to find your bean casting and all small pieces of silver that may have split off.



Step Fifteen: Clean your casting.

You may have to pry out some of the beans from your casting.

Step Sixteen: View your bean casting with the awe and wonder that a one of a kind piece deserves.

Look at it and see if you want to keep it. If you do not like it, go back to Step four, and cast it again. If you like it, go to Step Seventeen.

Step Seventeen: Plan a piece of jewelry with your new bean casting.

Now comes the hard part. You have to decide what to do with your new creation. They make great pendants that are easy to sell. I have decided to make a bracelet out of about six of them. I may include stones. If you have done silver smithing, go ahead and make a piece of jewelry. You can solder links onto them, add gemstones, claws, drill them or whatever your imagination thinks will suit the piece the best.

