SCROLLSAW WORKSHOP

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Digital Patterns

Designed by Steve Good

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General Pattern Information

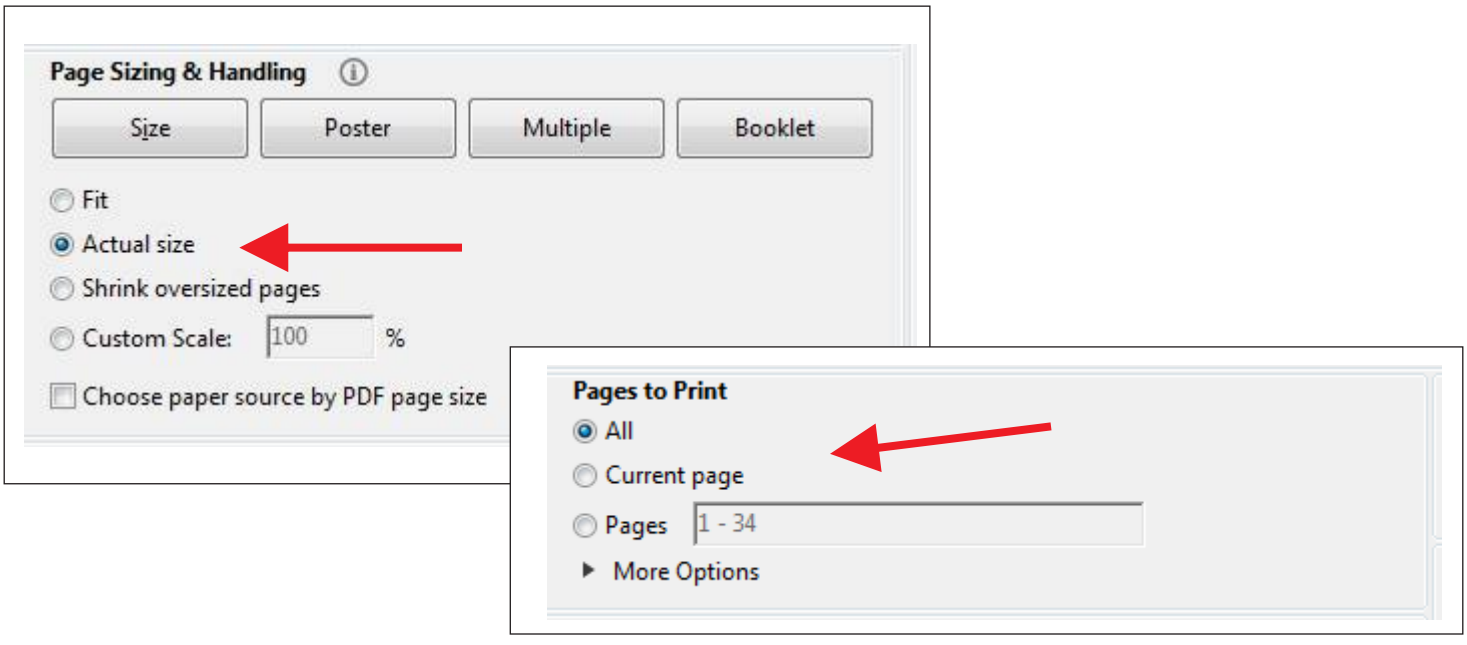
You may use this pattern to make as many of the project as you like. You are free to use any technique including mass production to build the project. The pattern may be copied and given to others provided the entire book is kept intact. You may not sell the pattern or include it in another commercial package of any type.

Steve Good retains the right to the pattern. If you have any questions about the use of this pattern please contact me at steve@stevedgood.com

Printing Instructions

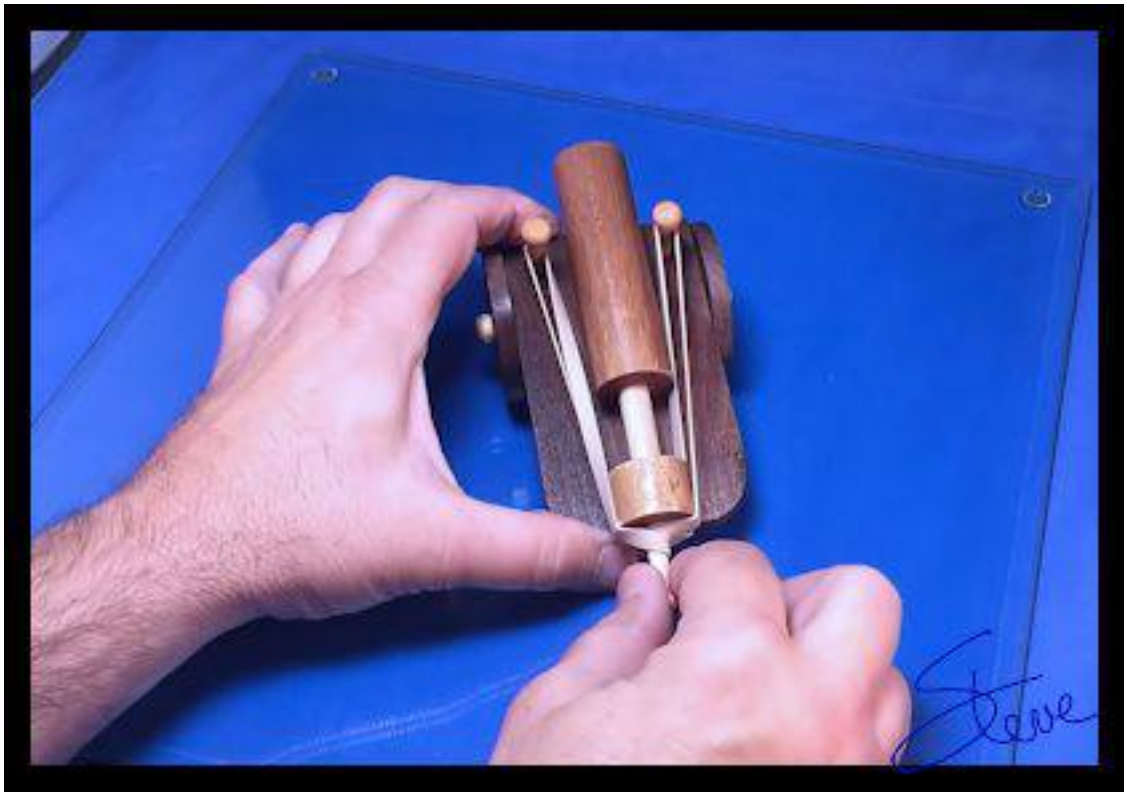
When printing this pattern it is important to print it full size. When you bring up the print dialog box look in the “Page Sizing & Handling” section. Make sure the “Actual Size” is selected before you hit print.

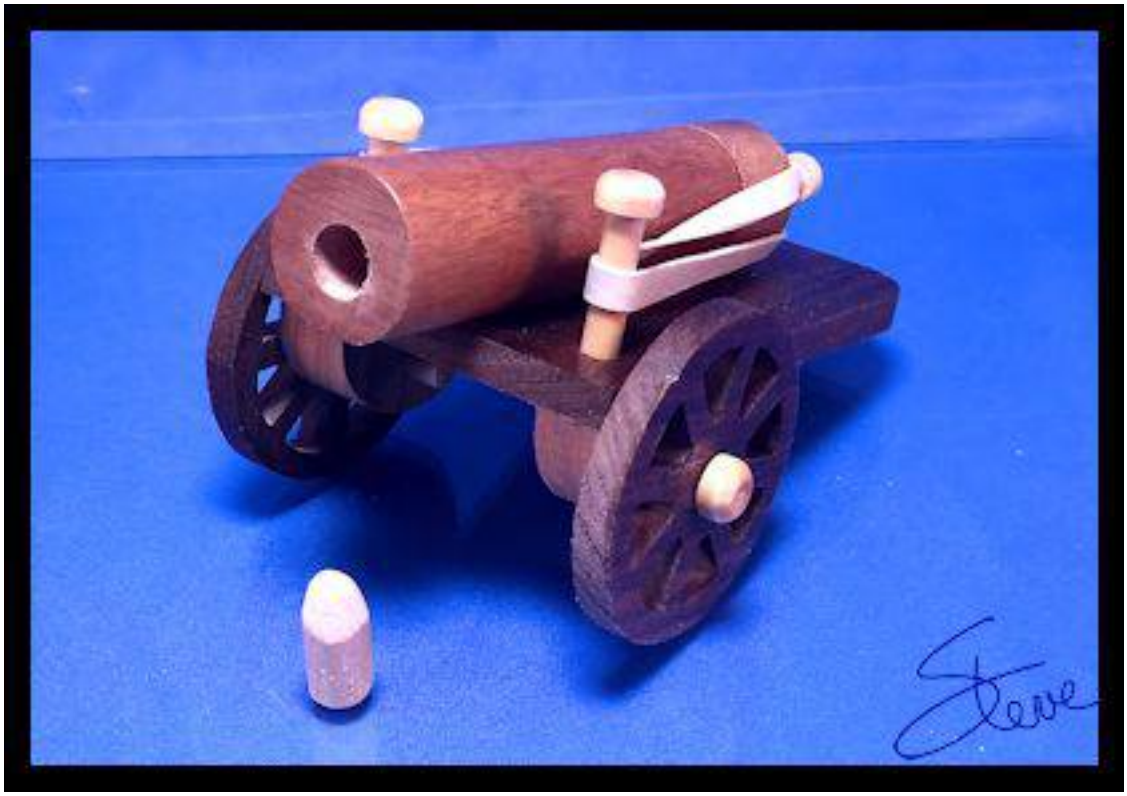
You also only need to print the page/s you need. After the print dialog opens look for the “Pages to Print” section. You can print the current page or a range of pages. This will help save ink by not printing the title/instruction pages.



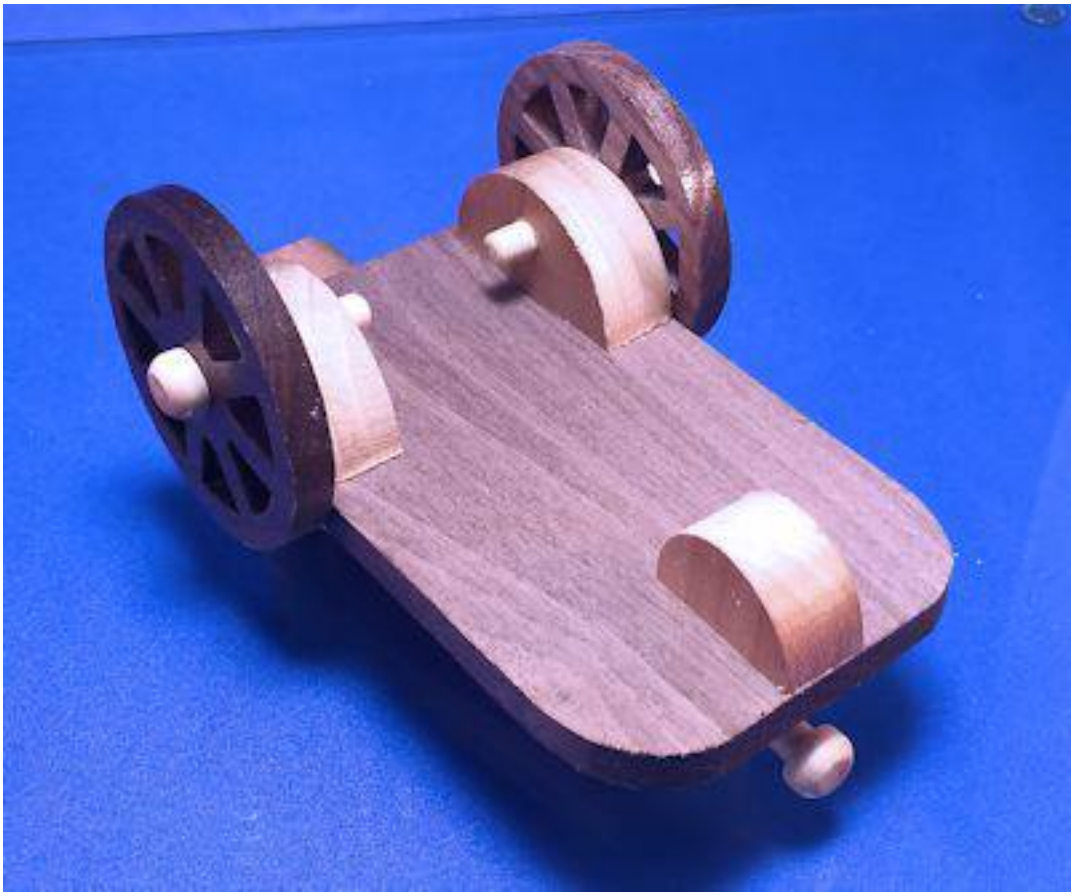
Rubber band powered Canon

Load the shell, Pull back and FIRE!!!

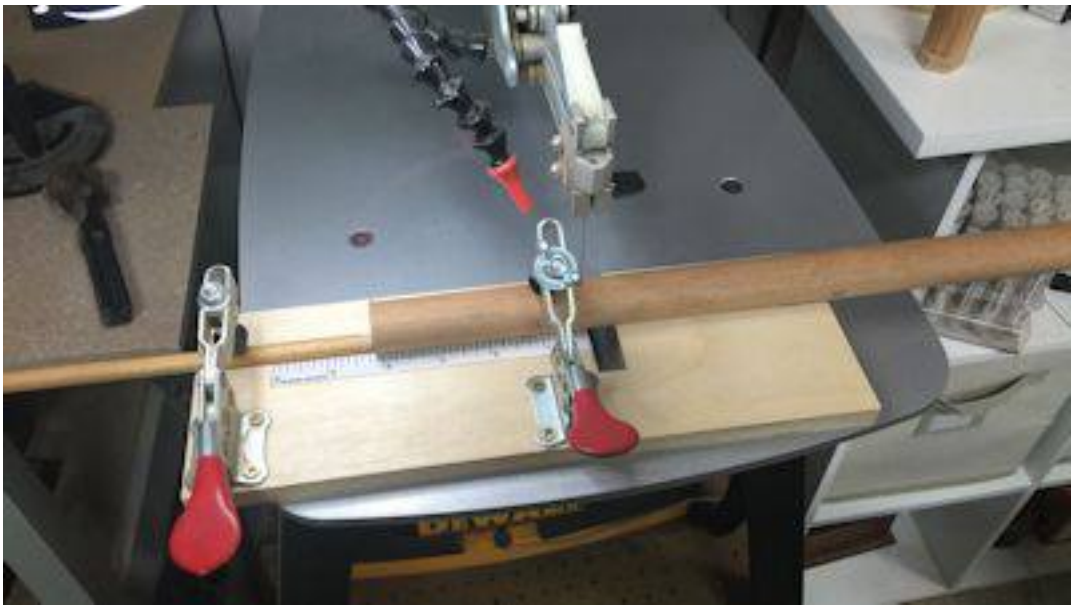



Steve

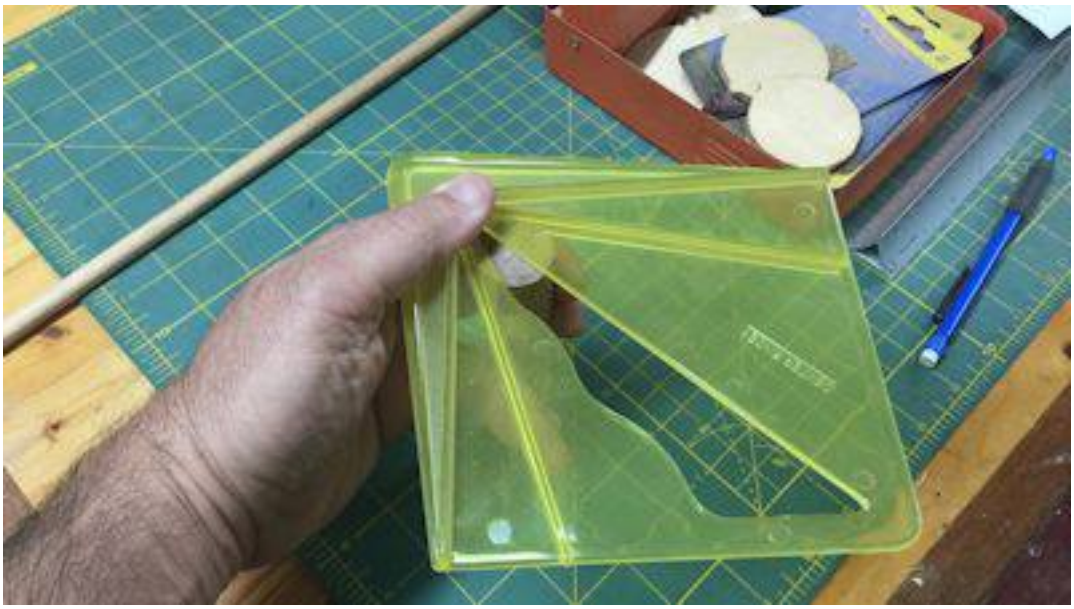
Bottom View



Cut a one inch diameter dowel to 4 1/8” long. I’m using my scroll saw dowel cross cut jig but any way you make the cut is fine. Just make it 4 1/8” long.

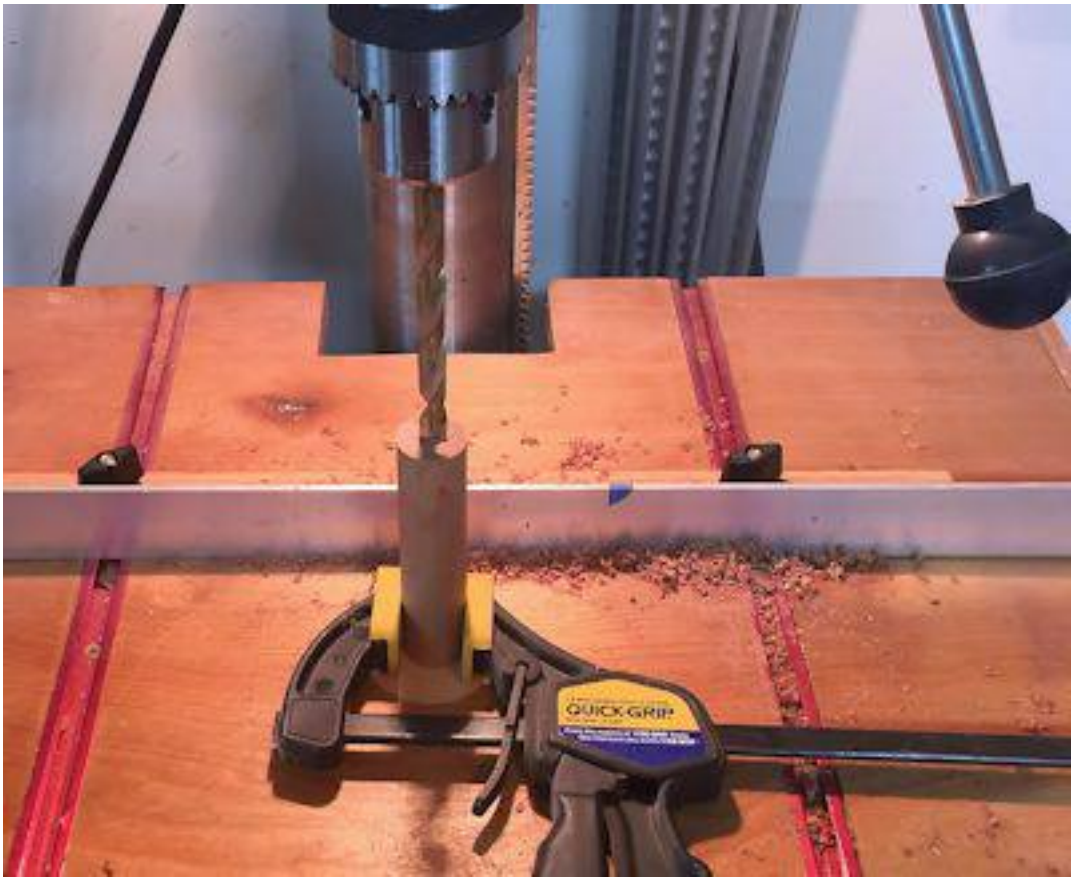


We are going to drill out the canon so we need to mark the center point



Use an awl to mark the drilling mark.

We are going to use 3/8” diameter dowel for the firing pin so I am drilling out the canon barrel one size bigger. 25/64” drill bit. This is not critical just make sure the 3/8” dowel will slide through the barrel easily.



Yo are not going to drill all the way through the barrel. The bottom 3/4” will be cut off to hold the firing pin. On the next two pages you will see how I measure the depth. I finished the drilling with a hand drill once I got the hole started straight with the drill press. You may be able to drill out the barrel with a hand drill but the drill press makes it much easier. This is not the safest operation so make sure the barrel is held tight with a clamp or centering jig.

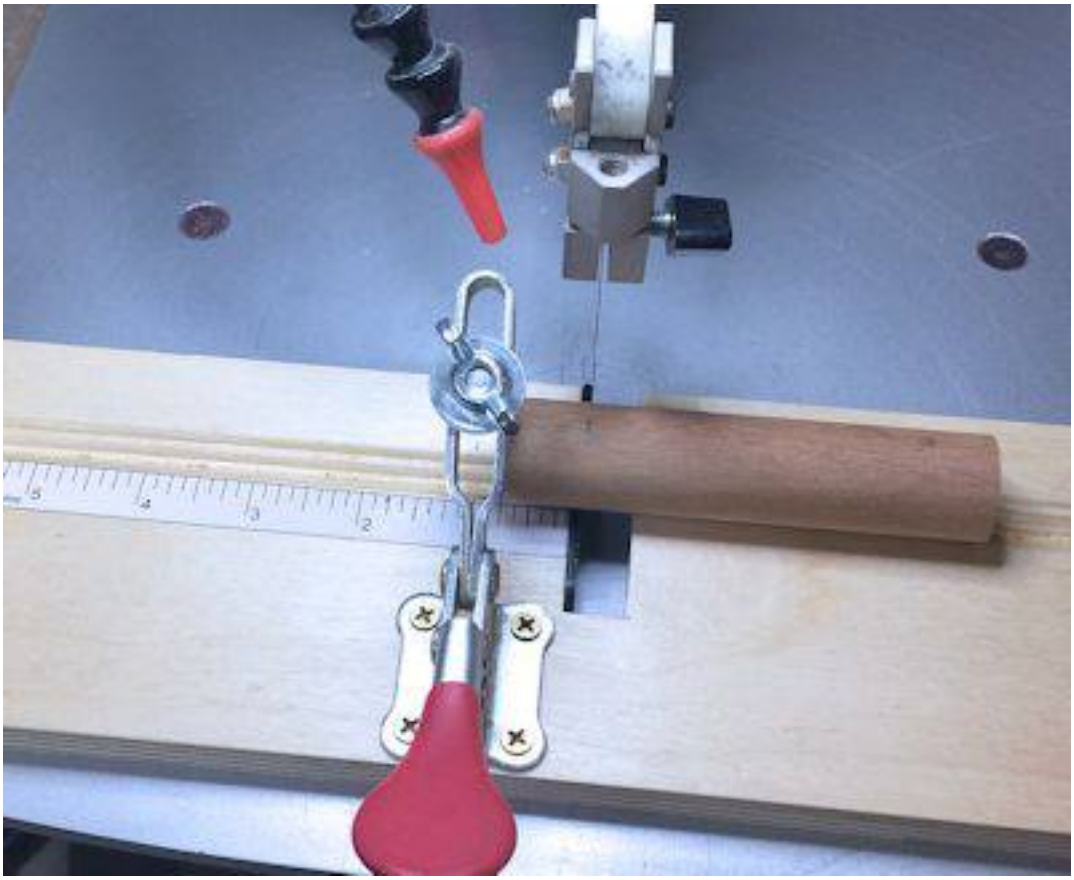
I/m using a dowel to measure how deep I got with the drill press. Notice the pencil mark. We will be cutting that part off and we need the center barrel hole just past that point.

I measured again after completing the drilling operation with a hand drill. The depth is just past the mark.

Before we cut off the barrel we need to sand a flat on the bottom of the barrel. This flat will be glued to the wagon.

This shows the flat sanded on the barrel.

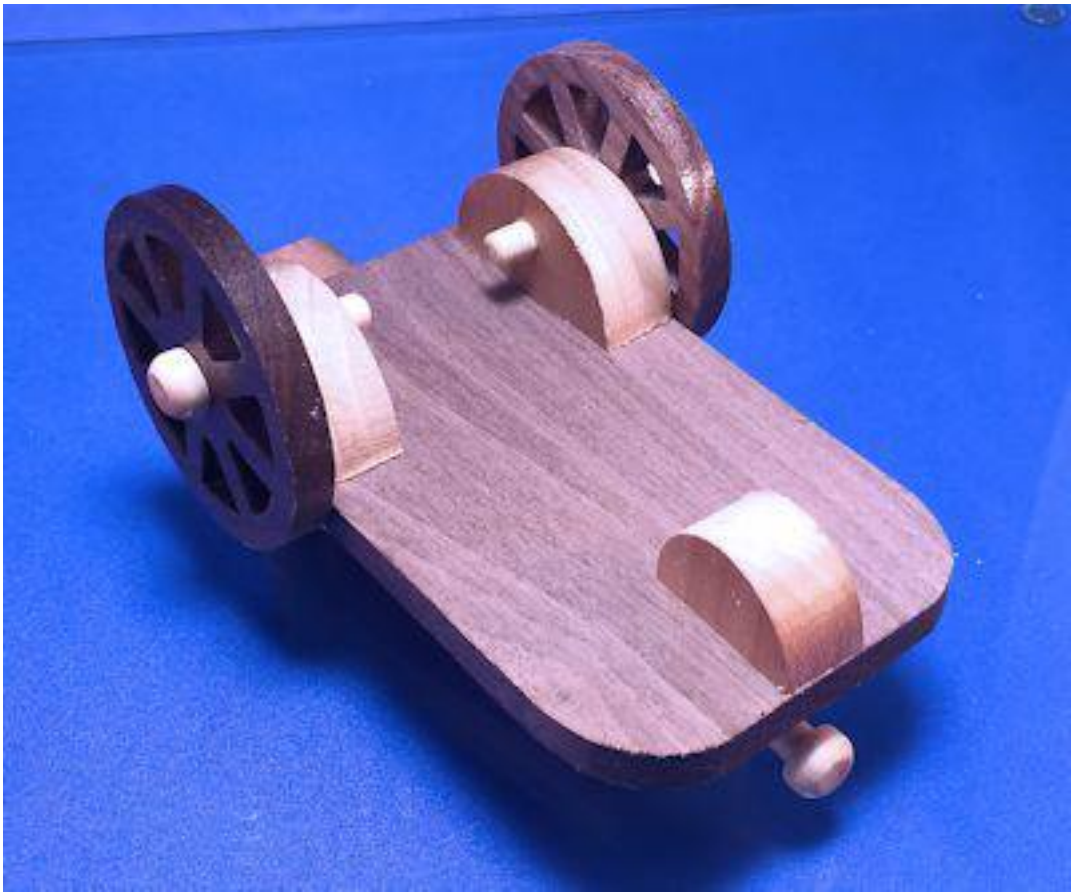
Now we are going to cut off the back 3/4” of the barrel.
This part will be glued to the firing pin.



The barrel is cut and the back piece is ready for the 3/8” dowel firing pin.

Before I glue in the firing pin I needed to re-drill with a 3/8” bit so the 3/8” dowel will fit snug. Remember we used a 25/64” bit to drill out the barrel.

Use the 1/4” axle pegs to install the wheels
Use the picture for reference to glue on the undercarriage.

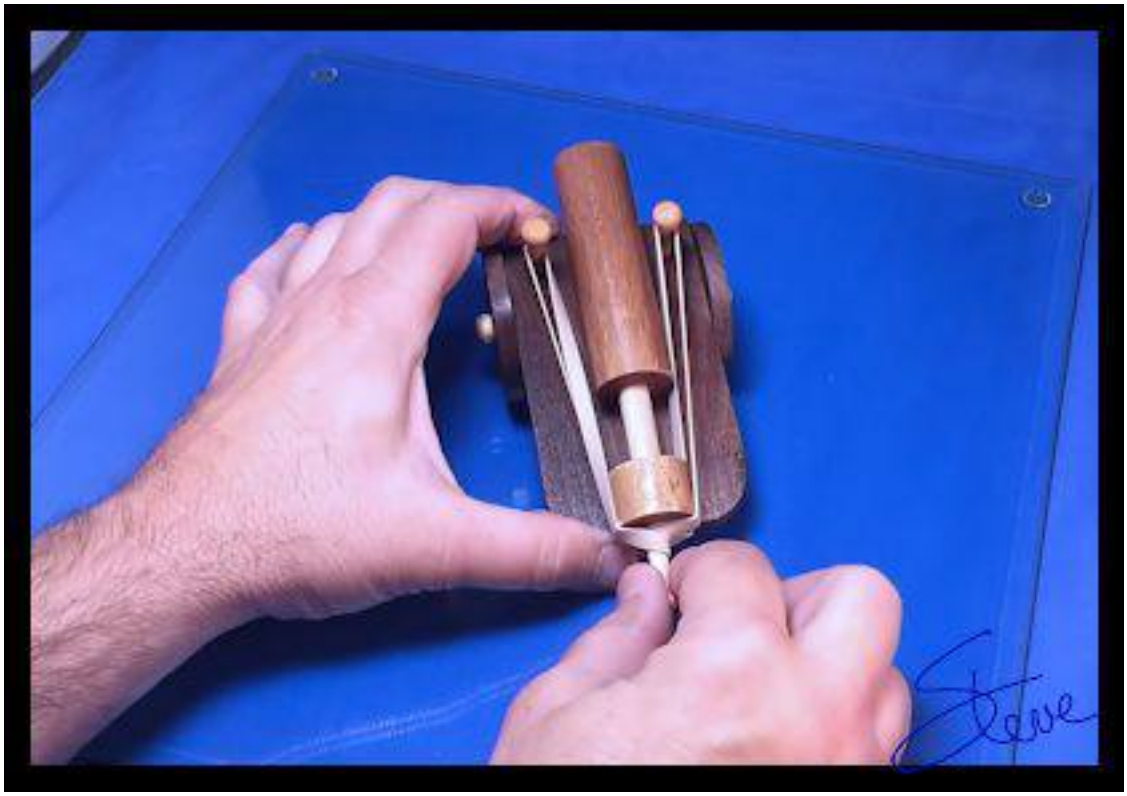


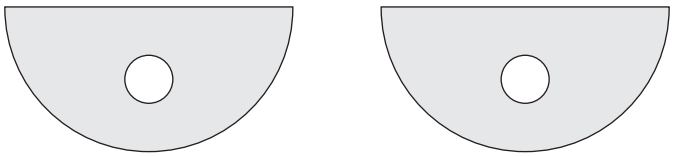
Glue the barrel to the center of the wagon
with about one inch over hang.

Glue in the two axle pegs to hold the rubber bands
to the wagon.

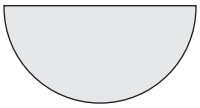
Drill and install the axle peg to the back to hold the
rubber bands and as your finger hold to pull back
the firing pin.

There are two rubber bands. One for each side. The firing pin is cut from 3/8” dimeter dowel. The firing pin is cut just short enough to leave about 1/2 for the shell to be inserted. When you pull back the firing pin the shell should fall back into the barrel. If is does not fall rock the canon back until the shell falls into the barrel.

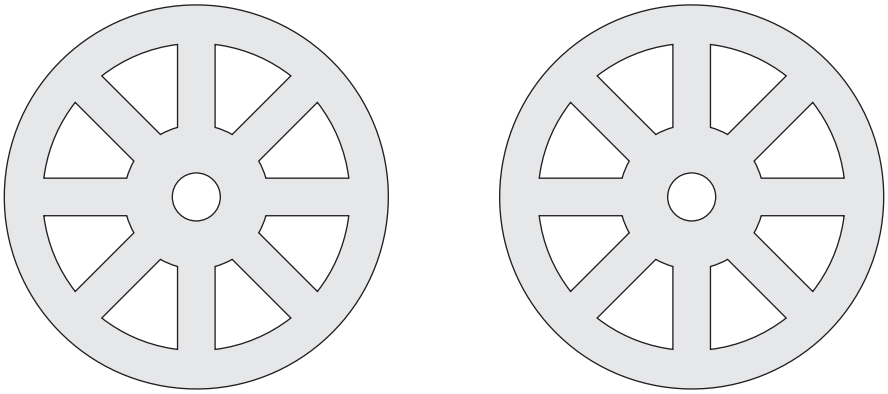




Wheel hubs 1/2” Thick



Rear wagon support 1/2” Thick



Wheel 1/4” Thick