# Build an Ice Fishing Pole

by **hpstoutharrow** on July 30, 2009

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## Intro: Build an Ice Fishing Pole

**Build an ice fishing pole for under $10.00.**

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This project was created as an activity for the Boy Scouts in preparation for our troop's Ice Fishing derby. The graphics, shown on these Instructables steps, were given to each scout as a packet to follow the step by step instructions.

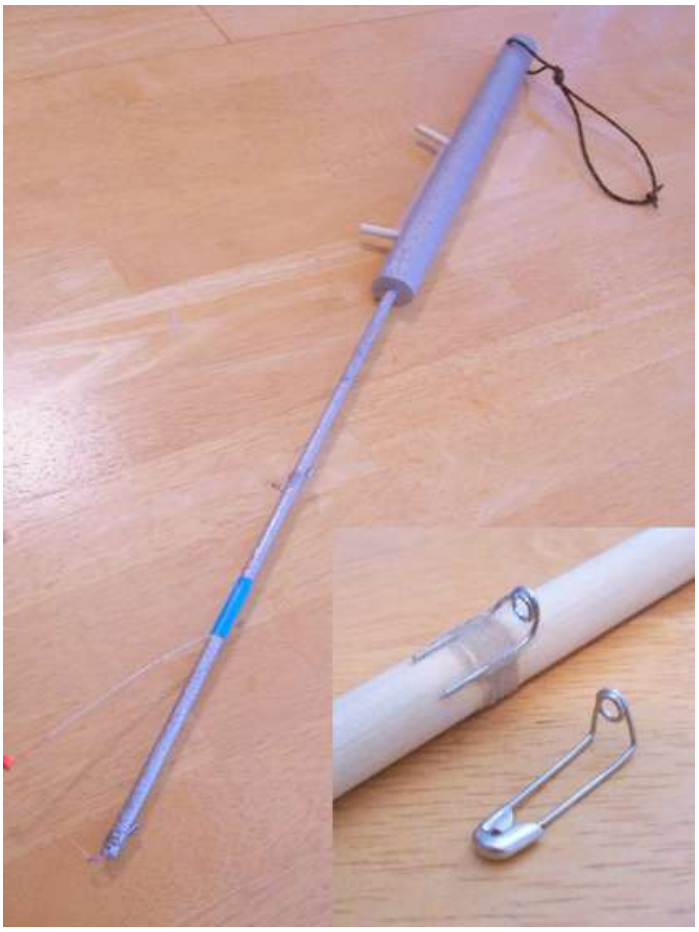
**Note:** Some steps refer to using a fixture. The construction of the fishing pole can can certainly be build without these fixtures.
Because we were building a large quantity of poles with the Boy Scout troop, some simple fixtures / assembly aids were created to keep the process moving as each scout cycled through the construction stations.

Information on fixtures is included for interest sake, but,again, they are by no means necessary to complete this project.

## step 1: Basic Fishing Pole

The picture below is the basic ice fishing pole the scouts built. The next few steps describe the process to build this pole.

Step 11 is the start of a **Reel Upgrade** . The Reel Upgrade would be used in place of the the basic fishing line winding posts.



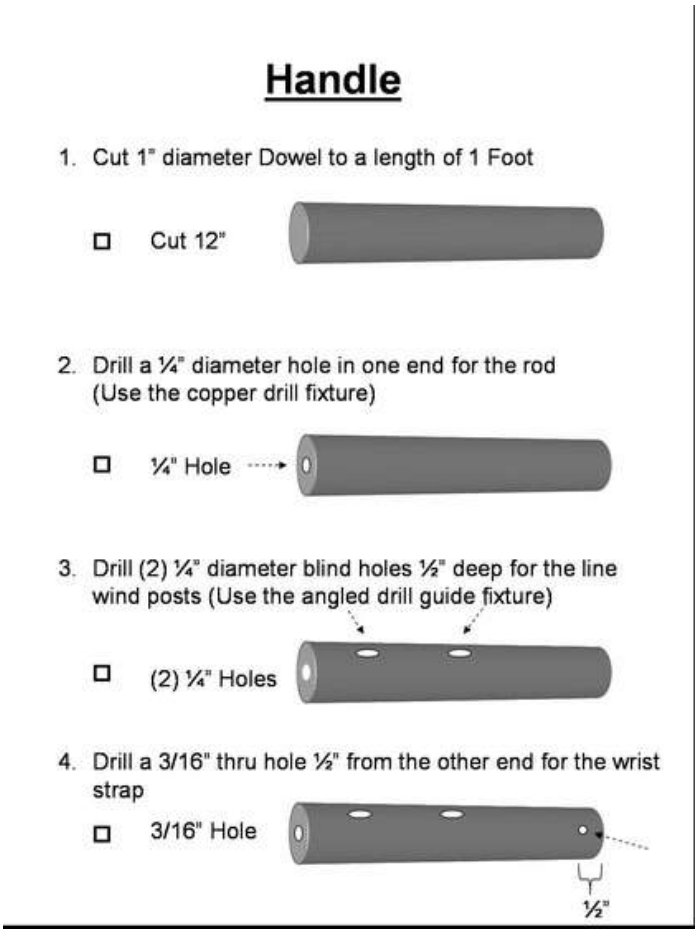
## step 2: Materials

**Handle** - 1" diameter wooden dowel 12" long (We used poplar wood)
**Rod** - 1/4" diameter wooden dowel 16" long
**Rod/Handle Attach** - wood glue
**Winding Posts** - (2) 1/4" diameter wooden dowels 1 1/2" long
**Eyelets** - (2) safety pins
**Eyelet Wrap** - heavy polyester sewing thread
**Eyelet Wrap Coating** - super glue
**Spring Bobber**
**Fishing line**
**Hook**
**Split Shot lead sinker**
**Wrist strap** - 24" length of decorative cord (optional)
**Finish** - Paint (optional)


## step 3: Handle

These graphics describing the step by step process for constructing the fishing pole were given to the scouts as instruction sheets.

Note: In step 2 & 3, the holes can be drilled by hand or with a drill press. Because we were building so many poles at ones we used some fixtures described in the next steps but are not necessary.

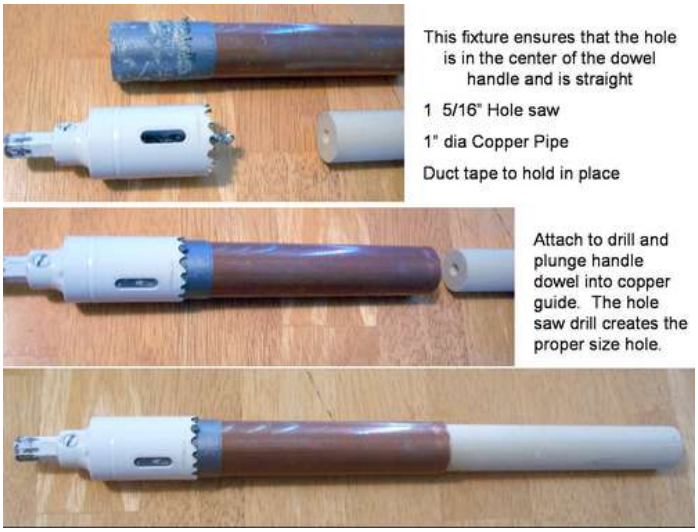



## step 4: Rod Hole Centering Tool

This tool worked well on a hand drill to make sure the hole was centered and aligned in the handle dowel.

It is a combination of a hole saw and a copper pipe. The 1" diameter copper pipe fits snuggly in the 1 5/16" diameter hole saw with a little duct tape.

With the drill turning the hole saw and pipe, the dowel is pushed into the copper pipe, the pipe centers and aligns the dowel axially to the saw's center drill bit.

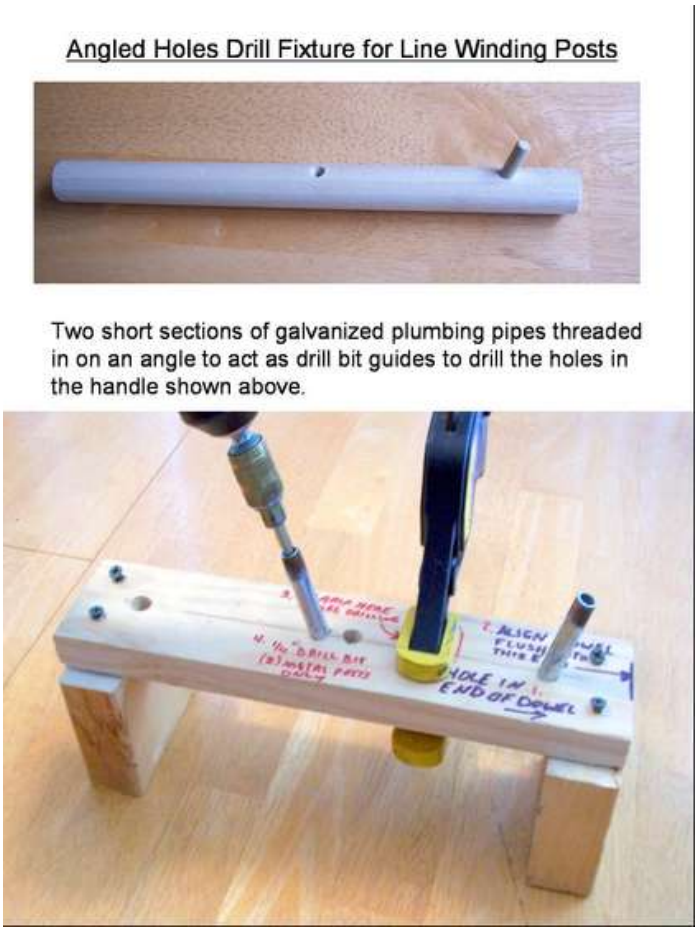



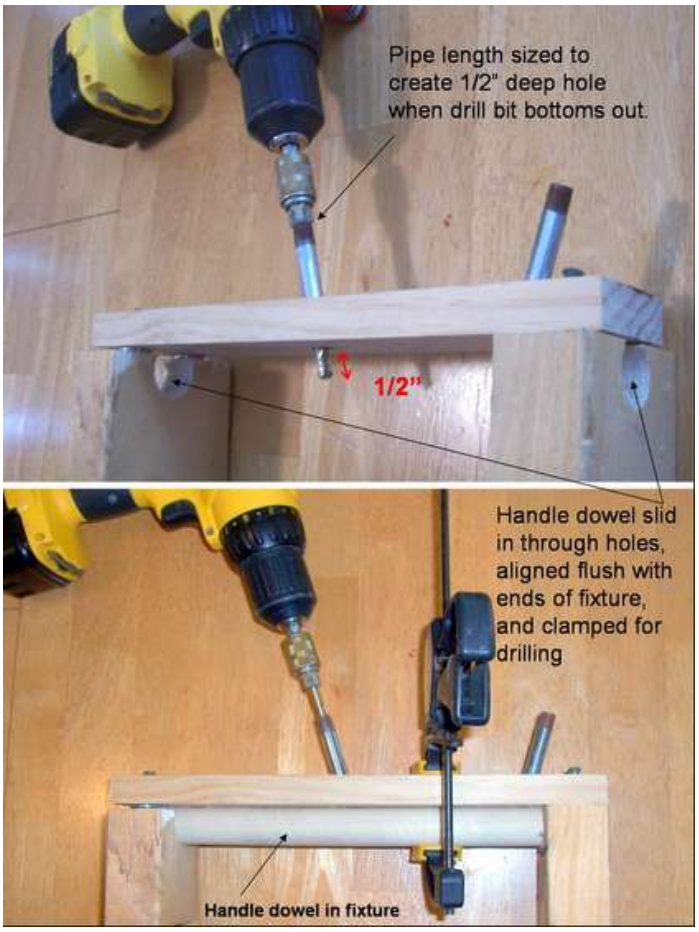
## step 5: Line Posts Drill Fixture

This fixture was used to drill the blind holes for the line posts in the handle dowel.

The posts need to be on a slightly splayed angle to retain the fishing line when it is wound around the posts.

It is a little difficult to drill angled holes on a round dowel and have them be aligned. This fixture made it quick and easy.



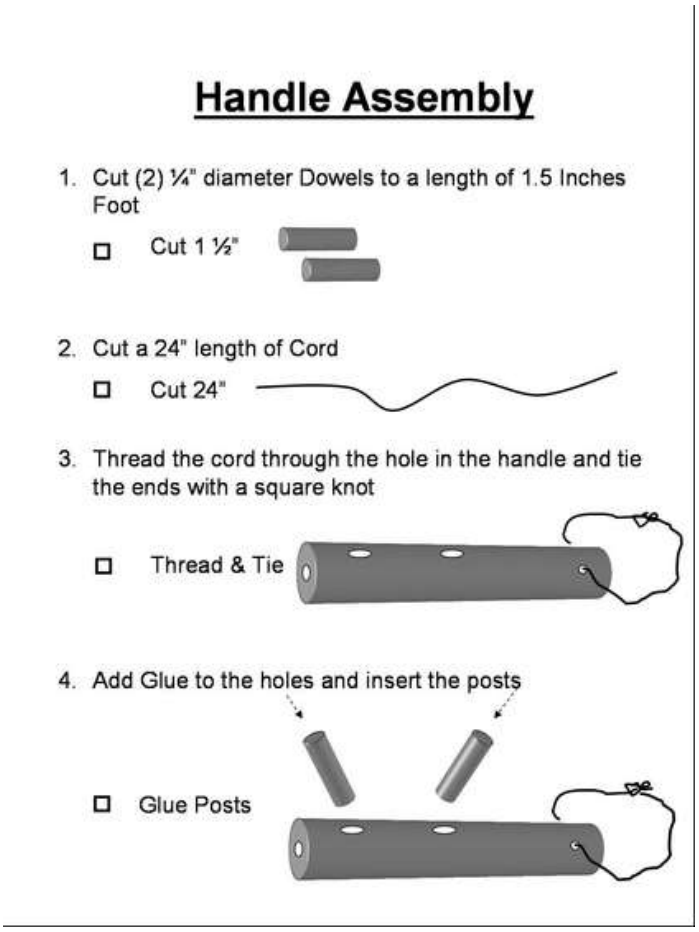



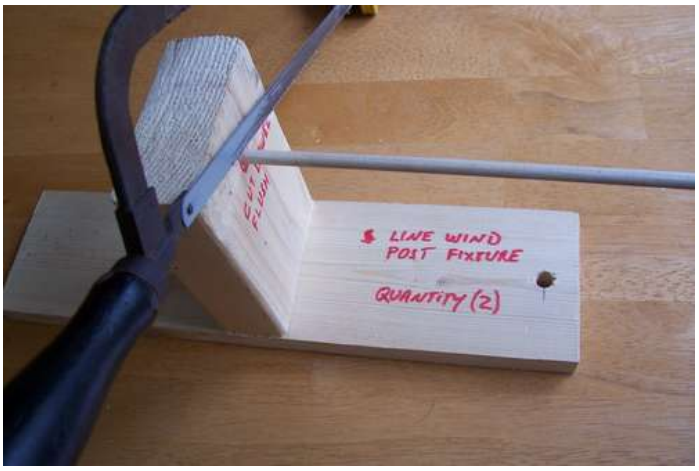

## step 6: Handle Assembly

(2) 1/4" diameter dowels are cut to a length of 1 1/2" for the fishing line winding posts.

Optional wrist strap is added.

We used a hole drilled into a section of 2x4 lumber to create a length gage and holding fixture to cut the dowels. (2nd picture below) A dowel was inserted into the 2x4 and cut flush = 1 1/2" dowel.




## step 7: Attach Eyelets

The Eyelets (or line guides) are made from safety pins. The winding fixture in the next step shows how the thread is wound around the safety pin and rod dowel to secure it.
When building this rod yourself, the eyelets will be attached by hand-winding with thread.

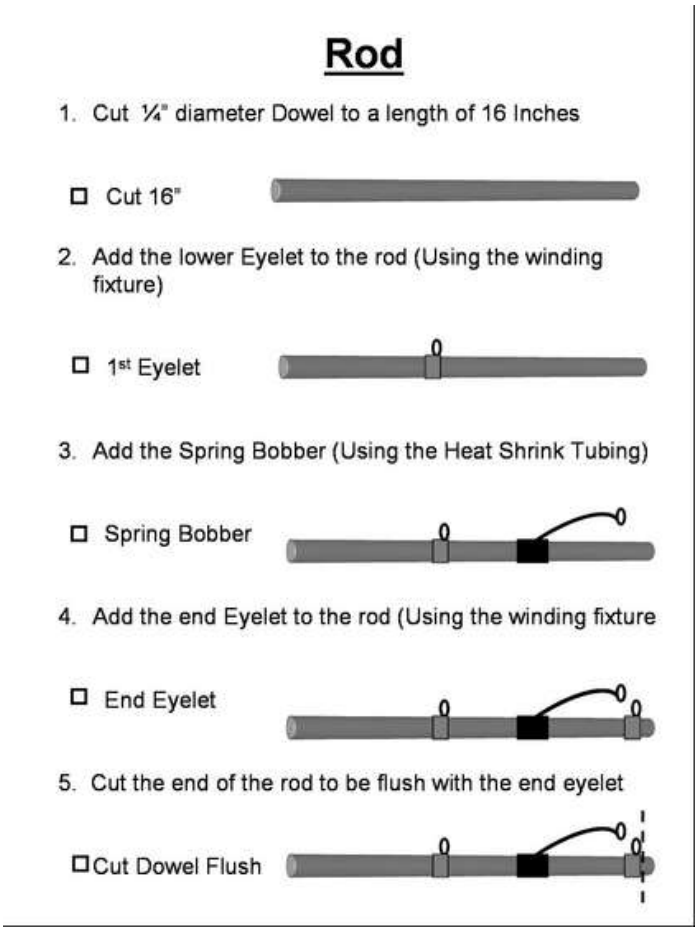
Note how the safety pin is bent in the step 8 photos, and review the winding fixture in step 7 to see how the eyelet is attached. The concept is the same for hand-winding.

**Note:** The spring bobber was attached with heat shrink tubing in the instructions below.

When we built these, the winding fixture was designed to work with the eyelets only so, we chose heat shrink tubing for the spring bobber attachment to avoid the scouts having to deal with hand- winding.

The spring bobber can be attached in a similar hand-wound manner with the same thread.

**Note:** Cutting the end of the rod dowel described in the graphic step 5 below is not required for hand-winding the outlets. The eyelet can be placed at the very end of the rod when hand-winding. (The winding fixture we used required the eyelet to be set back from the end of the rod so that the fixture could grasp the tip of the rod for winding).




## step 8: Eyelet Winding Fixture

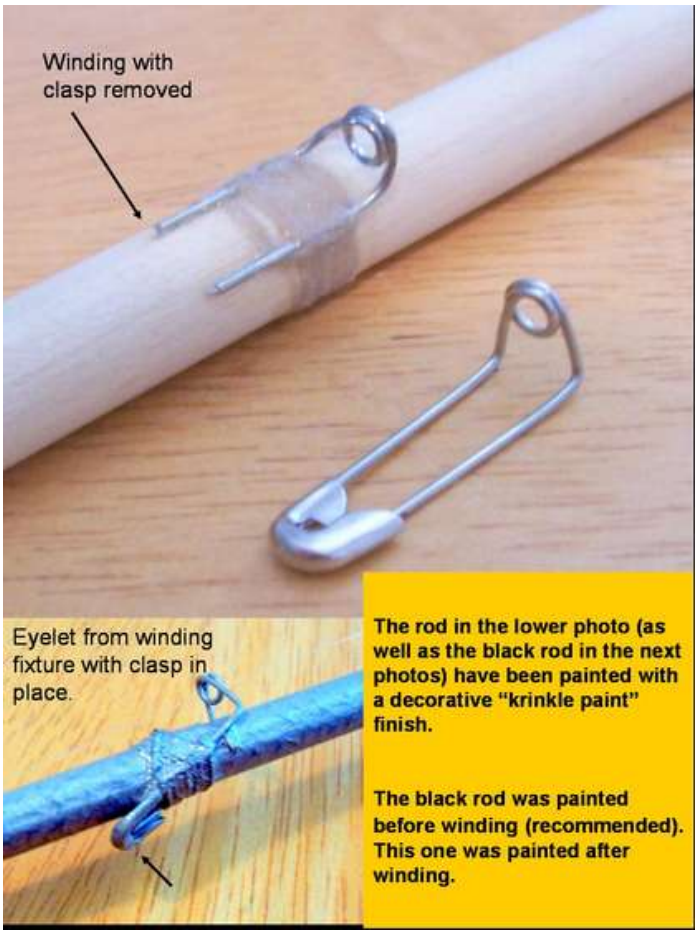
Eyelet winding fixture - VIDEO

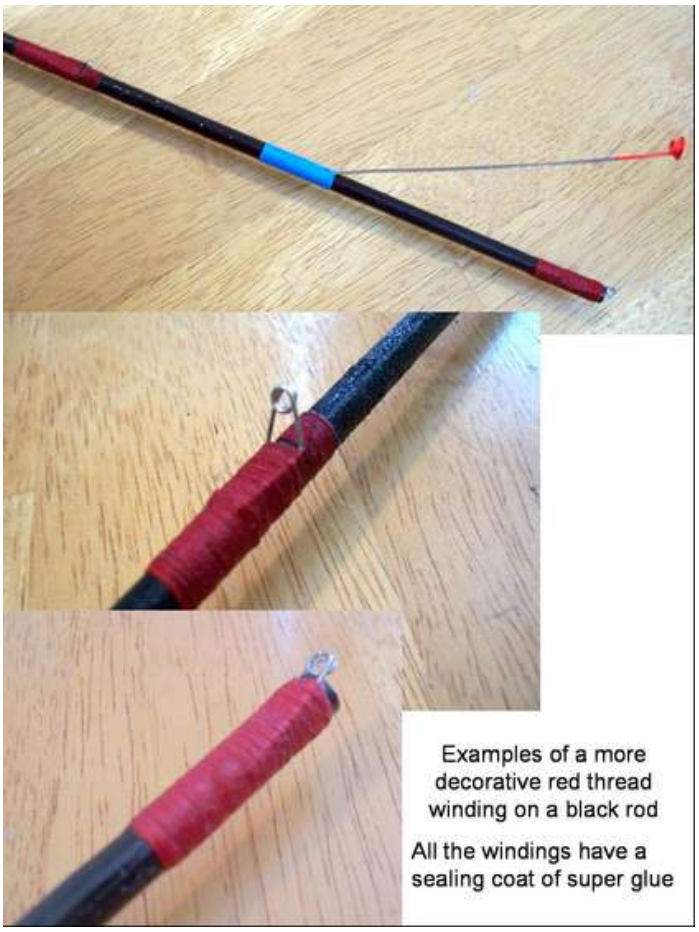
## step 9: Eyelet Winding Examples

**Note:** it is not included in the steps on the graphic instructions but, **when the winding is finished, the thread is entirely coated with super glue.**
This eliminates the need to tie-off the ends of the thread to prevent it from coming undone.
It also protects the thread from damage, adds strenght to the windings, and ensures a good bond to the rod.

Note: The winding fixture worked to allow the scouts to create secure windings for the eyelets however, the winding fixture did not allow for the removal of the "clasp" end of the safety pin.

The photos on the next pictures are of more decorative windings done by hand.
When doing the windings by hand, the "Clasp" end of the safety pin can be removed by clipping it off with wire cutters before finishing the windings for a cleaner look.



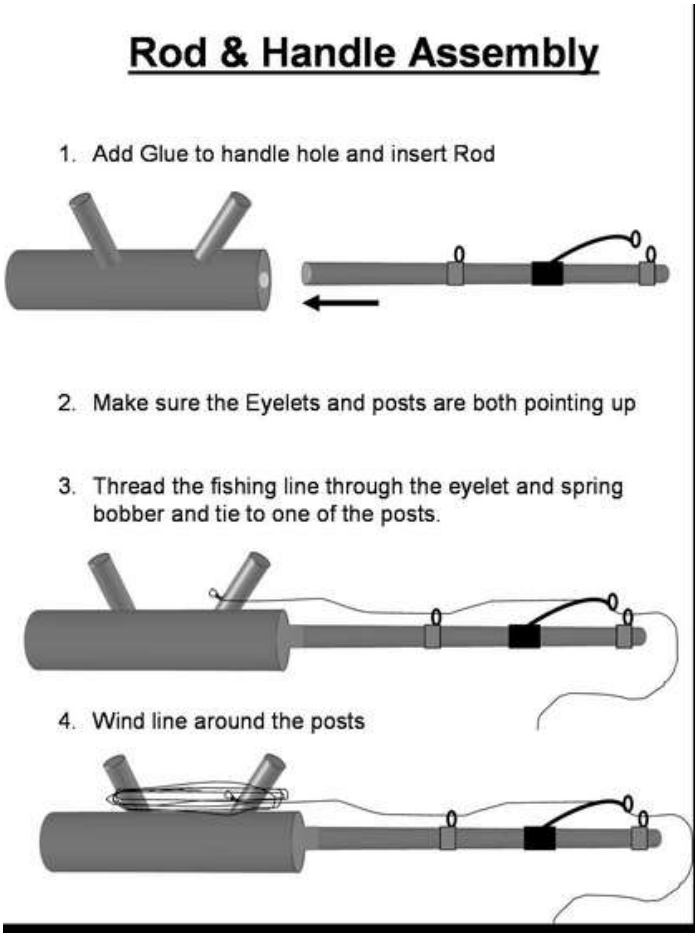




## step 10: Rod & Handle Assembly

After gluing the rod to handle the whole assembly can be painted if you like.

**Thread the fishing line, add a hook and a sinker and you are ready to go ice fishing.**

Have Fun!




## step 11: Reel Upgrade

This reel upgrade replaces the need for the fishing line winding posts described in the basic rod construction.

**The reel is made from:**
(2) CD's
3" diameter wooden hub (cut with a hole saw from 1x4 board)
(8) Stainless steel nails ((4) per side)
Brass toilet flange bolt (for the low profile head)
Nut for bolt
Molly lag
Rubber Faucet Washer
Electrical tape

I chose nails for the low profile head. The nails were pre-cut to length so they did not pass through the back side CD.

The CD's were clamped to the wooden hub and the nail holes were drilled through the CD and hub.
It is easier to clamp and drill each CD separately. That way the holes can be "through" holes. This allows the holes on each side to be off set a few degrees so the nails from each side do not interfere with each other.


Troop 49
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## step 12: Reel Attachment to Handle

**1.** Drill a hole through the handle large enough in diameter to allow the bolt to freely slide through.

**2** . Make a counter sink depression to allow a **rubber faucet washer** to fit flat on the handle

The height of the rubber washer should be proud of the handle to allow for some compression when the backside nut is tightened.
The backside nut tightens the reel against the rubber washer to adjust the amount of "drag" the reel has.

**3.** Notch out the backside of the handle as an orientation feature for the **molly lag** legs.
The molly lag makes a nice stand for the rod. It keeps the reel, and rod tip up when the rod is set down.

Make sure the bolt freely passes through the molly lag. You may need to enlarge the hole in the Molly. You do not want the bolt to thread into the molly (or you won't be able to adjust the drag with the back side nut.)

The next picture shows the backside nut. It is a decorative panel nut (I am not sure exactly what it is called. It is the type typically found on "assemble it yourself" furniture kits.) The head on it makes a nice thumb wheel to adjust the drag. It also has the right amount of off-set on the back side to position the head off the legs of the molly.

Note: Electrical tape is wound around the reel's wooden hub (between the two CD's) for a decorative finish.

Have fun ice fishing....we did.

## Related Instructables

**How to fish** by craigl

**How to set up A Fishing Rod For Lure Fishing** by K-Dawg

**Pocket-Sized Fishing Rod and Reel** by Toglefritz

**How to Fish** by irish death1

**Mini Fishing Kit** by Thelonelysandwitch

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**Fly Fishing** by hyrulianshinobi333

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