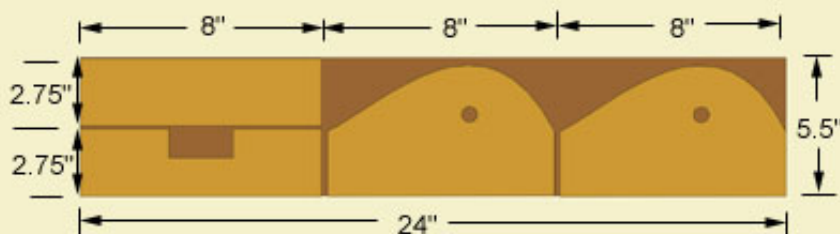




Tool Tip...

Page 1

Table Top String Dispenser

**Materials:**

- ▶ (1) 24" long 1x6 wood
- ▶ (1) 10" long 5/8" dowel rod
- ▶ (8) 1-1/4" long #6 wood screws
- ▶ (2) 2-3/8" long x 3/4" x 1/8" wood
- ▶ (2) 1/2" long #6 wood screws
- ▶ (1) Utility knife blade

Introduction:

This is a simple project that is a pretty handy thing to have around if you build a lot of set pieces, wheels, girandolas or other items that require a lot of string ties. Since I can't even think of any pyro devices that don't require string, that would include just about everything!

This tool is modeled after the common household tape dispenser, only modified to work with string instead. The benefit over just working with a roll of string sitting on the table is that the roll isn't prone to rolling off the table, can be unwound easily and best of all, the string can be quickly cut without having to pickup a pair of scissors or a knife. A razor blade mounted on the front edge provides the means to quickly cut off lengths of string

This tool is really handy when you have to cut many strings of the same length, such as when tying many similar sized drivers to a frame. You simply pull the string out to a measured mark on your table, then drop it down on the razor to cut it. It also works great for pre-tying clove hitch knots that will be cut and placed over many tie-points prior to cinching them.

Construction

Construction of the device is pretty straight forward, as no fancy woodworking is required here. You don't even have to round off the side pieces if you want, you could just build a square box and it would work just as well.

A length of 1x6 is first cut into three equal sized pieces that are 8" long. One of these pieces is then ripped in half to produce the front and back sides. The two side pieces are stacked on top of each other and then a 5/8" hole is drilled through both of them, visually positioning the hole roughly as seen in the diagram. The front side is notched to a size that will fit your razor blade, which was 2-3/8" wide x 1-1/4" deep for the blade I used.

The box is assembled by just butting the joints flat against each other with wood glue in between, then clamped and allowed to dry. Two

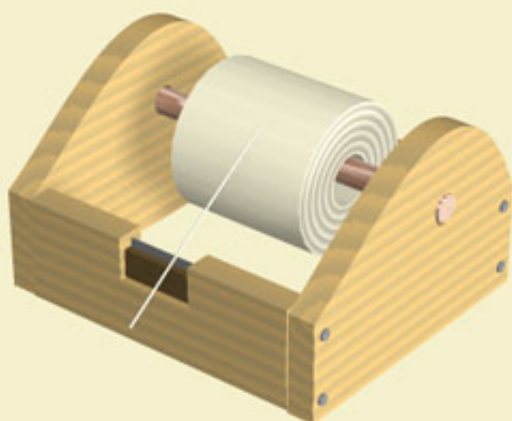


Figure 1: The completed string dispenser.

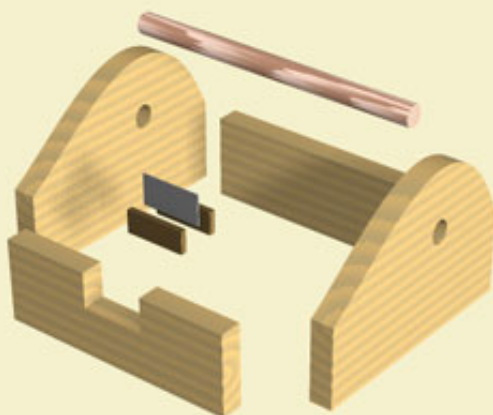


Figure 2: Exploded view of string dispenser parts.



Figure 3: Inserting razor blade between the wood slats.



Figure 4: Clamping the blade down by tightening the two wood screws.

wood screws are then used to reinforce each joint as seen in Figure 1.

A 10" length of dowel rod that matches the hole size you drilled is run through the side holes and just left loose so that it can be removed in order to change out different rolls of string. If it fits so loose that it tends to fall out during use you can always wrap a turn or two of masking tape around one end so that it wedges more tightly in place.

The razor blade is held in place by sandwiching it between two thin strips of wood, which are then clamped together using wood screws as seen in Figure 3 and 4. This design requires that you use a blade with tapered sides rather than the square type of blades, otherwise you would have to cut the wood strips to be longer than the blade so that the screws could avoid hitting the blade. After the blade is clamped, wood glue is palced on the bottom of the wood slats and the assembly is set into the notched hole to dry. Because only the bottom of the wood slats are glued, the screws can still be loosened to replace blades as needed.

One design improvement could be to protect the blade so that fingers can't accidentally be cut on it. I did manage to cut myself on this once while blindly reaching into a box to fetch the dispenser. To prevent this, the blade would have to be enclosed such that it was only accessible through a slot wide enough to permit the string but narrow enough to block a finger from getting in. The trade-off with this safety feature is that you wouldn't be able to make as close of a cut with the finger guard in place. Another alternative could be to just cover the blade with a removable blade guard when not in use. 🔥

