

Make your Own Amtgard Crossbow

These plans only cover the difficult parts of the design, the actual trigger bar up to you. Ok, the design is inefficient, but it CAN be built with nothing more than a Dremel and only costs about \$15.

Materials

- (2) solid fiberglass bicycle flagpoles from Wal-Mart (1/4" diameter)
 - (1) Parson's leg, 2x2x28"
 - (10) 1 1/8" washers with 3/16" center
 - (3) small nails
 - 25-1/2" crossbow string from Wal-Mart
 - lots of 3/4" fiberglass strapping tape
 - a large table spoon
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1. Cut the fiberglass pole into (3) 26-1/2" segments and (2) 10" segments using an abrasive cutting wheel or by taping and cutting with a fine-tooth hacksaw.
2. Mark the center of each piece.
3. Arrange the cross section like this: (all the centers line up)

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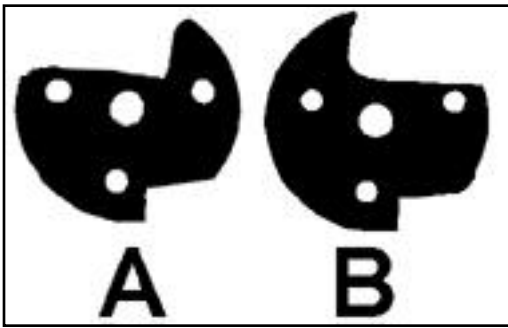
O.O.O.....

^.....^..These 2 are the short ones

4. Tape together the 3 long ones first (but not in the area reinforced by the 2 shorter dowels). Use about a 10" piece of tape wound VERY TIGHT as many times around as it will go over itself. Don't go down the line, just make a band. All the bands will be adjacent, but make every other one first and then fill in the spaces between. It is important not to work a twist into the bow.
5. Make the reinforced portion with all 5 pieces in its cross section by taping in a similar manner.
6. Do something to keep the bowstring from slipping down, I taped on little 1" chunks of dowel on the front side.
7. Put a drop of silicone oil down the ends of the 3-dowel set.

The nut is the other difficult portion. No foundry to cast it, I assume. So get out them washers.

1. Cut out 6 of "A" and 4 of "B" with a cutting wheel.



2. Drill out the holes, preferably using the first as a guide to be sure they line up.
3. Put 2 of "B" on either side of a stack of "A". The top jaw part faces the opposite direction. The notches on bottom of all 10 pieces should line up.
4. Get 3 nails that fit really tight in the holes and put them through. Cut off most of the excess and hammer down the stump flat like a rivet.

As for putting a lever on the trigger, it goes something like this:



I made mine out of a chunk of chain line fence "tension bar" that I bent into shape and put a little pivot on.

Bow tips that curved forward would significantly improve this design, but I've got no idea how to make ones that would stay put, they take enormous force and the dowels shear past each other when pulled, changing the shape it would mount to.

The Parson's leg is just a cheap convenient piece to use for a stock.

The spoon can be bent and fixed as a trigger guard.