Mark’s Place

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Jangling Chained Skull Halloween Prop How-To

The original idea for this came from an unlikely source. I attended a county fair and they had a mobile "Spooky Trail" set up, it was incredibly lame, consisting of a motorized cart that went through a semi-dark trailer (it was daylight and light leaked in from several places).

All of the effects were missing or broken and watching the dirty metal walls of the trailer go by didn't do much for me. But the one thing that worked was a skull suspended in chains and lit from below, which looked pretty cool so I decided to build it.

One of the problems I had was that I purchased 3 motors for my FCG (Flying Crank Ghost), but I really only have space for one so I have a couple of slow (4 rpm) motors left and was wondering what to do with them. I decided to use one to make the chains move around adding a small element of movement.

The picture above makes it appear the chains are painted red, in actuality this is an artifact of the picture, they are lit from below by a orange/red light.

Part 1 - The Box

I was interested in a free-standing prop, something I could set where I needed it to be, it also had to have a fairly small "footprint", that is it couldn't take up much storage room in the garage. I decided on a plywood column 4 feet high and 1 foot wide. This way the prop can serve double duty as a stand for something and takes up a small amount of storage - in fact I built 2 of them, one with the skull and one without and they stack on top of each other.

Construction of the box was fairly simple, 4 panels 1 foot by 4 feet are cut from plywood. The front piece has a hole cut in it that is 18 inches high by 10" wide (the maximum width permitted by the side braces.) The back piece has a hole for access and airflow cut in at the top and bottom, the exact position doesn't matter.

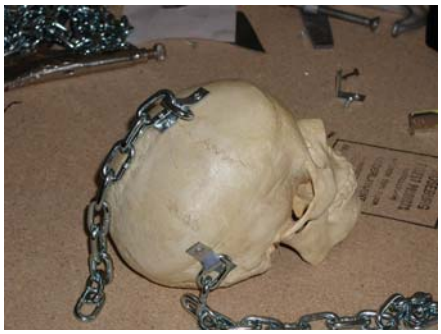
The 1"x1" pieces serve double duty. They are 3 feet long and when centered leave 6 inches on the top and bottom. These will be the platform the "end caps" connect to. They also are the brace the plywood sides connect to. Nail or screw the plywood to them and attach to form a square to be.

I left the bottom open so wires and things can come and go. To make it sturdy, cut a 2x4 to the appropriate size and nail the pieces around the bottom as shown. The top is larger to make a platform for something else to sit on it. I chose a 18"x18" piece of plywood and stuck a couple of small pieces of 1x1 to it to make it removable. The 1x1's fit inside the main square snugly (it takes a bit of measuring but can be done) so the whole top is removable.

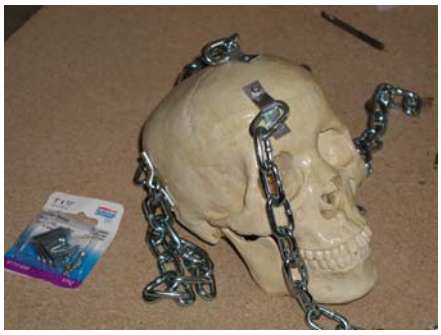
Since I was concerned with heat and airflow (see part 4) I didn't want a solid "end cap" but one that permitted airflow, so I picked up a 2x2 foot piece of heavy duty chicken wire for a dollar and cut it to the right size, then set it down on top of the ends of the 1x1's and screwed it in. This gives a nice "end cap" to hang the skull from (shown).

Part 2 - The Skull

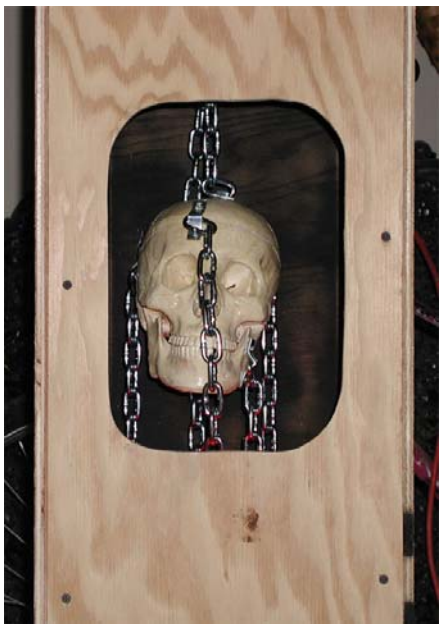
Now that the box was ready, I needed to get the skull the way I wanted it. I needed 2 things, the top half of the skull was unconnected and I was concerned that the weight of all the chains would make standard gluing impossible, plus I wanted chains to be hanging all over the skull. I spent some time looking for a U-shaped flange that would allow me to bolt the chain to the skull but couldn't find anything appropriate. Finally I created my own, taking some small cheap corner-supports I bent them with a pair of vice-grips to the appropriate shape and screwed them to the side of the skull. You can see them in the second skull picture...



The first one is on the top of the skull and must reach to the "end cap" or the level where the 1x1 pieces end. I used a cut piece of chain to hang the skull temporarily and measure the distance. You want the skull to hang so it is centered in the hole on the side of the wooden box. Notice How I am holding the skull together by screwing the chain holders into both sides of the break.



Then you attach as many chains as you have purchased, just bolt them on wherever you want. Make sure they are long enough to reach down to about 1 inch above the bottom "End Cap". Although not shown here, I found after I had put it all together I needed another chain connected to the back of the skull to keep it from twisting as the motor moved the chains, more about that later.

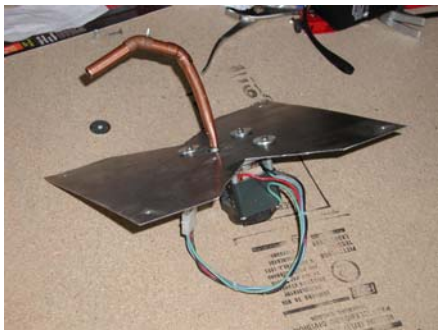


Once your done with the chains, hang it up and make sure everything fits! (I used cable ties to connect the chain to the mesh on the top). The skull should be about centered, the chains should hang down to an inch or so above where the bottom "end cap" will go.

Part 3 - The Motor

Now that we have a box and a skull with some dangling chains its time to make it move. This is not a high-speed popup startle scare, more of weird slowly moving atmospheric type of prop.

For the bottom "end cap" I needed something sturdier than the wire mesh so I went out and purchased a cheap piece of scrap aluminum plate. Then I cut it down to the right size and cut some big gaps in the sides to allow air to vent. If you've got a spare slow-rpm motor and were wondering what to do with it, this is a possible solution....of course you can also use a higher speed motor as well. Mount the motor to the center so the shaft sticks up.



The next step is to make the "shaft". In this case what we really need is for the shaft to stick up an inch or two and then turn to the side. The end result will be like a big slow mixer with the shaft hitting the chains and making the whole thing move. I couldn't really find anything appropriate so, since this doesn't have to withstand a lot of torque, I just took some copper tubing and crimped it down so it would fit the motor shaft.

In my case I couldn't find a 90 degree elbow for the tubing ,so I ended up purchasing 2-45degree elbows, but it works about the same. I recommend the 90 degree elbow if you can find it though.

Then it is time to bolt the bottom "end cap" on with the motor attached. I would run the motor at this stage to ensure the tubing does in fact hit the dangling chains and causes them to move around.

Part 4 - The Lights

My original idea was to get some small floodlights and have one below and one above, which is why I was so concerned about airflow and not letting things overheat. However there really isn't enough room for traditional floods and their sockets and after messing around with AC connections and different light sockets and worrying that since I am not an electrician I might mess something up and cause a fire - I decided to abandon the "build it myself" approach and go with LOW TECH and safe.

Therefore I went to my local Halloween store and purchased a string of mini Christmas lights in Halloween orange and purple. What I was able to find was a string of 100 orange and a string of 100 purple. I figured 100 lights total would be all I need so I replaced 50 with the other color and discarded the unused strand of lights. Using some masking tape (I should have used some kind of high

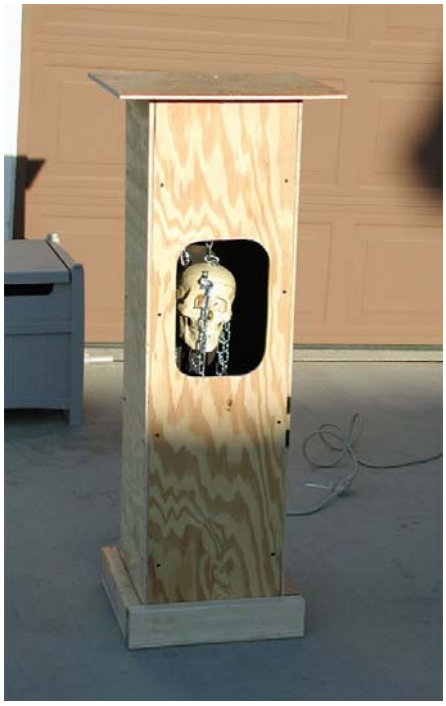
temperature tape but didn't have any) I carefully placed them side-by-side without the tape touching any of the actual bulb (because they get hot). Then some more tape on the top to hold it all together and some "wings" on each side for connecting to the prop. Remember it is all one strand of lights so I had to leave a couple of feet between the groups to allow one to be on top of the hole and the other side to be on the bottom.

In the picture you can see I have finished the orange lights and am just starting the purple ones. It turned out the orange lights are a LOT brighter than the purple ones so I put them on the bottom.

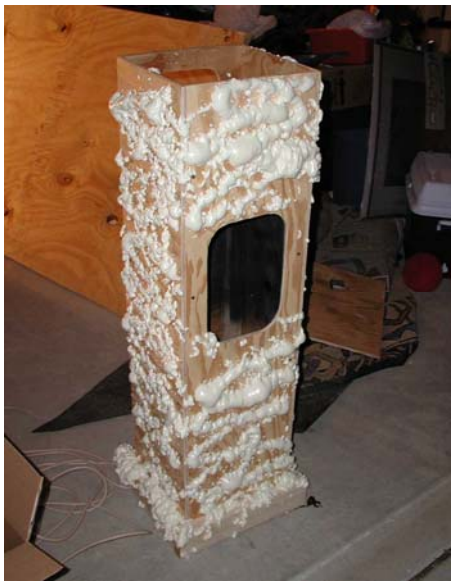
Once complete, I used a staple gun and stapled the "wings" to the inside of the box above and below the hole. This way, when they are lit they light up the skull with a different color from above and below. It looks kind of funky, with this big blob of lights in some tape hanging below the opening but unless people get right up and look inside they can't see it.

And that is it! the basic prop is finished. I can't give good instruction on wiring up the lights and motor because everyone will have a different motor. One of the advantages is that with the lights you have an actual wall plug and if you purchased a motor that also has one, you don't need to do any wiring, just plug everything in.

Part 5 - The Outside



Of course, as it stands right now it isn't very "spooky". The bare wood doesn't really go with the ambiance. Although you can select any type of effect you want, I decided to go with a swampy oozy yucky kind of look. First though I painted the inside where people can see a black so the skull and highlights from the chain would show up better.



In order to get the look, I knew I needed more than just paint on the outside, so I turned to my old friend - expanding foam (a well known brand of this is called "Great Stuff" when you spray it expands and gets all bumpy). As you can see from the picture, I just kind of sprayed it around. I wasn't interested in total coverage, just enough to make it less recognizable.

The next step was painting. I painted black point upwards so it got the bottom of the bumps (and looked like shadows) and then sprayed green pointing downwards so it got the top of the bumps.

After the painting step I purchased a couple of cheap plastic vines at the discount store and cut them into two foot long pieces and used hot glue to glue them in random locations. It really works to break up the "squareness" of the original wooden box. See the picture at the top of the page.

And there you have it! I don't have a movie of the prop in action, but I like the way the motor moves the chains around kind of randomly and the skull twists and turns in its "cage". There is room inside to install a speaker and have sounds issuing forth from the skull also.