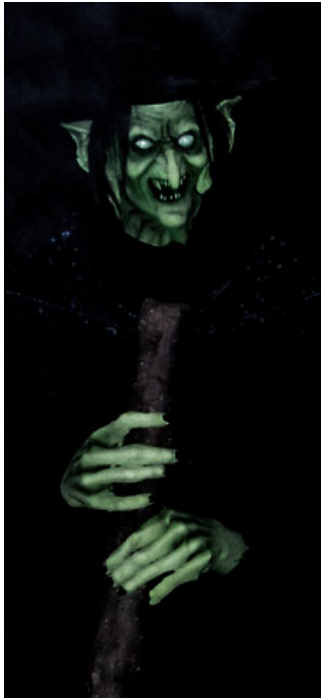




WITCH STIRRING A HANGING CAULDRON

BACKGROUND



In the spring of 2004, I decided our little yard haunt needed a witch stirring a cauldron. The prop would occupy the left side of our porch, a prominent position as the TOT's made their visits to the door. This area would make it easy to setup a scene and would provide excellent coverage from the weather.

There were a number of terrific examples on the net from some great prop builders and companies. I ran across a fantastic pair of animated witches with a cauldron built by Rick Stern of StageSix Productions. After viewing a movie and taking a look at the body forms and mechanics, I knew I wanted something like that prop. Since monstermakers.com was selling the complete animatronic display for about \$13,000, I also knew I would have look at other alternatives to stay within my very modest budget.

Also on the market at that time was an animated witch being sold by frightcatalog.com and some other retailers. The \$3,400 witch featured a large metal-looking cauldron with chains, flickering green lights and a soundtrack, however the cost was still way more than what I was willing to spend on a yard haunt prop.

I decided to try and build a large witch stirring a cauldron myself. There were some excellent handmade props and project descriptions that caught my attention at the time. A terrific Crank Witch project by Mano showed me the basic mechanics of moving the head from side to side. Scary Terry showed me how to I could use a wiper motor for the stirring motion in this project. And Death Studios created the mask and hands that would provide the creepy details for our witch.

Obtained from
Omarshauntedtrail.com

With those ideas in mind, I set out to build our prop. The following pages contain some basic descriptions of the project. The process was very much trial and error. As a consequence, these pages are not a step-by-step how-to with every material and measurement specifically detailed. It's just a simple outline that hopefully will give you some ideas on how to build your own witch stirring a cauldron project.

WITCH STIRRING A HANGING CAULDRON

THE CAULDRON



This is the finished hanging cauldron with the stirring stick. This is a pretty large prop standing about three feet tall at the rim. It is "suspended" above the ground on a base of three 2x8 boards. All of the "hardware" is made of foam so the prop is quite light and easy to move around.



The cauldron started off as a plastic 55-gallon drum that I got from a local food manufacturer. This used drum had been filled with soy sauce so the ride home in my Trooper was deliciously fragrant! I had to settle for a blue drum since it was free. But if you can find a black drum, it will save you from having to apply a base coat of paint. If you cannot find a free drum from a local source, www.usplastic.com does sell new black drums.



I cut the top of the drum off with a jigsaw just above the top "strap". Make a starter hole for the jigsaw blade with an appropriately sized drill bit.

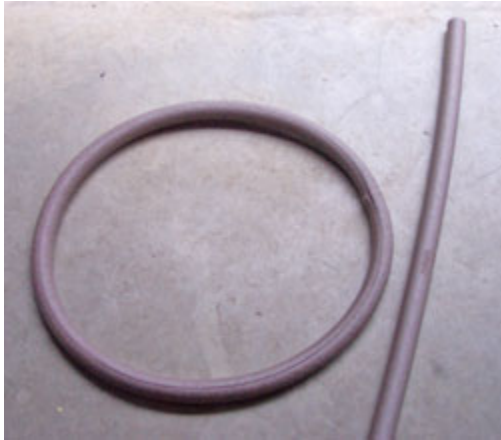


I had to clean the interior of my used drum to remove the residual soy sauce. I discarded the top piece of the drum but you might find some other use for it.



I painted the bottom part of the drum with a spray paint made for plastics. I used Krylon® Fusion Satin Black. It took the entire can to cover this big hunk of blue plastic. If you can find a black drum you can skip, having to paint.

WITCH STIRRING A HANGING CAULDRON



The cauldron rim is made from the foam insulation used to cover water pipes. You can find it in the plumbing department of your home improvement store. It has a slit running lengthwise. Slip the foam over the edge of your drum to make sure you have enough length. Glue the ends together to form a ring.



After the glue on the ring has dried, slip the ring back over the rim of the drum. I used a glue made for plastics to attach the ring to the rim. Make sure the glue is safe for foam. Some glues will eat away foam products.



Next I created the "hardware" that adds to the detail of the prop. For the "metal" bands, I used a blue foam called Dow Sill Seal. It is normally used for insulation between a foundation and sill plate or around windows. It comes in a 5 1/2" x 50' roll for about \$7. I doubled the foam back on itself and used 3M Super 77 Multipurpose Adhesive to attach it to itself and the cauldron.



The other "hardware" was made from two large styrofoam rings purchased from a craft store. The bracket securing the rings was made from two pieces of extruded pink foam carved and sanded to fit the ring. The pieces were glued together and mounted to a small piece of wood with the ring hanging free in the bracket. Two small screws were driven thru the inside of cauldron into the wood to secure it in place.



The same "hardware" was attached to the other side of the cauldron.

WITCH STIRRING A HANGING CAULDRON



The cauldron chain was purchased a discount store in the Halloween section. It is a styrofoam chain that comes in a six-foot length. Two sections of chain were used.

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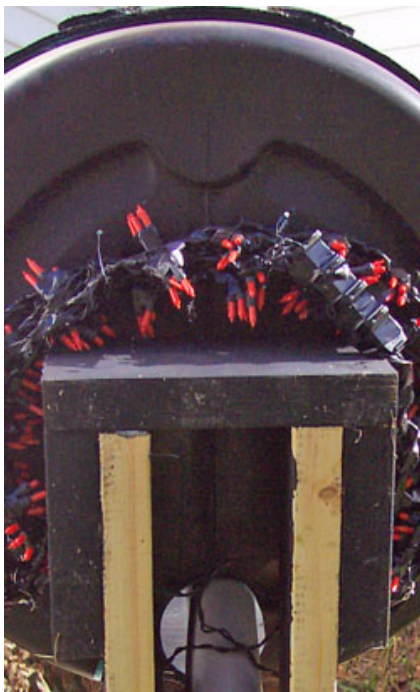


One of the links at the end of the chain was separated and re-glued around each of the two rings.

Several circles of the blue sill foam were cut out and attached to the bands to create a type of rivet. The entire prop was then painted flat black. Finally, rust colored paint was airbrushed on to create the final look.



Looking at it from the bottom, you can see the position of the cauldron in relation to its base. It was balanced as far forward as possible without tipping before it was attached to the base. This makes it difficult to see the lights and the base when viewed from the front at a normal viewing angle.



The cauldron is attached to the black painted 2x8 boards which were screwed together to form a three-sided base. The unpainted 2x4's were used to attach the cauldron base to the witch framework. A 3-inch hole was drilled in the bottom of the cauldron at the back to provide access for the fog piping and wiring

Obtained from
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Four strings of orange flickering lights were taped together and mounted with wire as close to the bottom of the cauldron as possible.

Because the lights flicker at different rates, there was always some orange glow and the change in intensity suggested the look of fire below the cauldron.



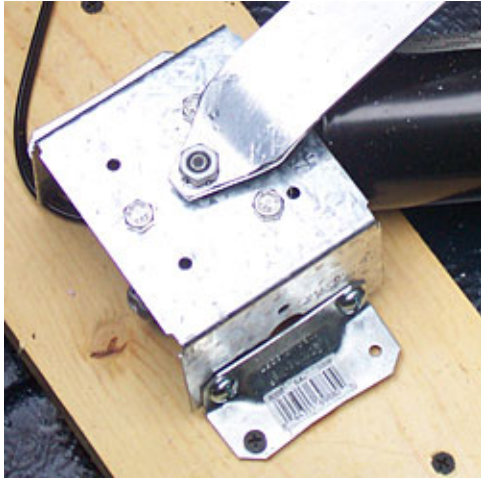
Inside the cauldron are another set of lights and the stirring mechanism.



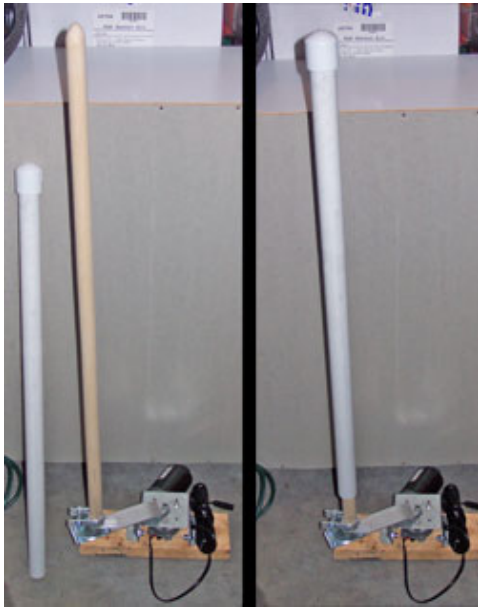
The stirrer is powered by a 12-volt DC windshield wiper motor purchased from www.allelectronics.com.

I used an 8-volt, 5 amp power supply connected to the low speed terminals on the motor. This produced a speed of about 28 RPM. Scary Terry has a great web page with details about using wiper motors in prop building.

Obtained from
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I mounted the motor with a 4x4 post cap and some angle brackets as Scary Terry described on this page. I made an arm out of some 1/8" x 2" aluminum stock which connects the motor to the stirring stick.



The stirring stick is made of two pieces. A 3/4" x 3' wooden dowel is attached directly to the motor arm.

The end of the dowel has been sharpened to a smooth point. This point is the spin point for the stirrer.

A PVC end cap is attached to a section of 1" PVC pipe that is 3 inches shorter than the dowel. When the pipe is slid down over the wooden dowel, the pipe should spin freely.

I was concerned that having the spin point at the top of the dowel might cause the stirrer to bind. So I created another spin point at the connection of the dowel and the motor arm.



I used parts of a caster wheel and a homemade bracket to create the connection. However, this turned out to be completely UNNECESSARY. This additional spin point actually caused binding problems and I ended up securing that connection to keep it from spinning. It would be much better and much easier to just drill a hole thru the arm and attach the dowel directly to the arm with a long screw.

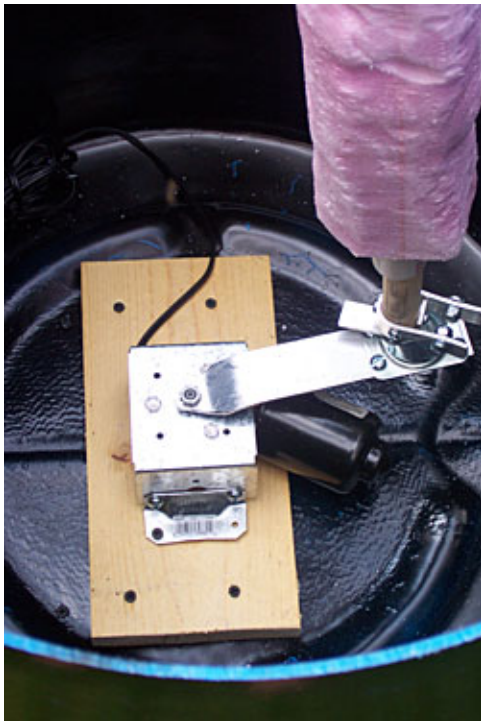
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I wanted a more realistic stick than a smooth piece of pipe. So I used pink extruded foam to cover the pipe.

I glued two 12"x2" x4" rectangular pieces of foam together which formed a 12x4x4 block. Then I used a 1" bit to drill thru the long length of the glued block.

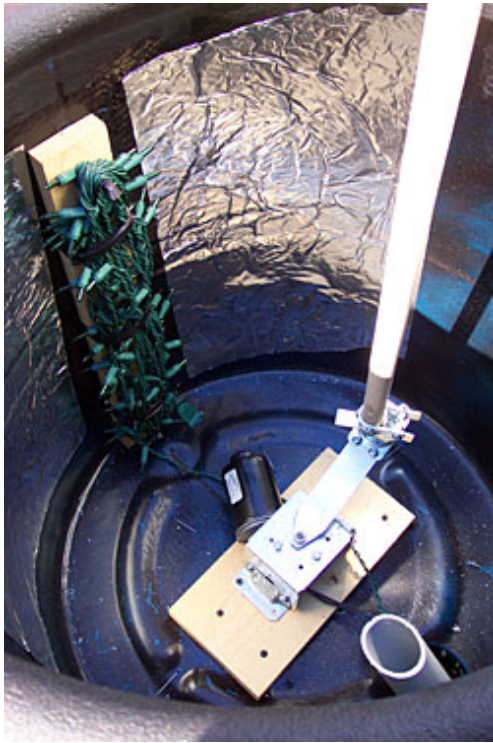
I made two of these blocks and slipped them down over the PVC. I made one more 12x4x4 block but only drilled 6" into that block. I put that block over the end of the PVC and glued the three blocks together. Then I then carved and painted the foam to look like wood.



The entire stirrer mechanism was screwed thru the bottom of the cauldron into the base unit.

The motor arm was bent up slightly so the top of the stir stick was moving in smaller circle than the bottom of the stick.

This created a much more realistic movement in the finished prop. If you think about how a human would actually stir a large pot of liquid, the hand lower on the stick would move in a larger circle than the hand on top.



Inside the cauldron, I also added a string of green holiday lights wrapped around a couple of nails driven into a 1"x3" board cut to the depth of the cauldron.

The board was secured to the side of the cauldron by two small screws driven from the outside beneath the foam bands.

I used the 3M adhesive to attach two large pieces of aluminum foil to the front of the inside of the cauldron. The reflection off the foil enhanced the green glow of the lights.



On the back of the cauldron, I attached a 1"x6" scrap piece of wood. I mounted a pair of green high intensity LED lights pointing straight up at the witch's face on the wood.

This provided a nice complement to the interior lights and really illuminated the witch's face. I used black duct tape to mount the lights so they could be easily positioned.



Compared to one of the "large" cauldrons sold during the Halloween season, this prop is huge.

Obtained from
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THE WITCH



The completed witch stands about six-feet tall. The frame is made of PVC and other common materials.

The back-and-forth head movement is made by simple crank arm linkage.

The hand skeleton is made of plastic tubing and wire and is covered by a pair of Death Studio's latex monster hands which were painted to match the mask.



The witch frame is built on a base made of 2"x4" and 2"x6" lumber screwed together for easy disassembly.

It connects to the base of cauldron with two four foot 2x4's standing on edge. The attachment point is variable based on how far the witch needs to be away from the stirrer.



Four U-bolts are attached to the 2x6 uprights to hold the PVC frame. The frame is made out of schedule 40, 1.5" PVC pipe and fittings. Two 33" sections of 1.5" PVC pipe form the "legs" of the witch.

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The PVC legs are attached to 90 degree elbow fittings on each side and three T-type fittings in between.

Two of the T's connect to short pieces of pipe to form the "sides" while the center T is connected to a 1.5" to 3/4" reducer fitting which holds the pivot point of the extension of the 1/2" PVC pipe "neck".



The PCV fittings are attached tightly together with small 1 1/2 " sections of pipe and secured with screws.



Two 45 degree fittings and three sections of PVC pipe form the "sides". I used black duct tape to secure some of the joints. This made it easy to adjust the angles. The "sides" are also used to mount the motor that will turn the witch's head.

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The "shoulders" are formed from two T-fittings, two 45 degree elbow fittings and one 4-way junction. The 4-way has a 3/4" reducer on the section pointing down. The reducer acts as a guide for the 1/2" PVC "neck".



The 45-degree elbow fittings each connect to an end cap fitting. An O-ring bolt is mounted thru a hole drilled in the center of the end cap.

This forms the attachment point for the arms.



The arms are made from sections of 1/2" PVC with an end cap on each end. These end caps have an O-bolt mounted thru a hole drilled in the cap. A piece of hollow core foam is slid on to each arm piece to provide some bulk. This foam came from a cut up "pool noodle". The O-bolts are attached loosely together with small zip-ties.



The motor that turns the "neck" is a 6 RPM 12vDC gear motor that I purchased from www.allelectronics.com, however they do not seem to have that motor that now.

Wil at www.deathlord.net sells a 6.5 RPM that could be used. The motor is attached to a 1"x1" piece of steel angle stock long enough to span the two "sides".

Two inch screws mount the motor assembly to the frame. The "neck" is a section of 1/2" PVC with an end cap attached to the bottom. The end cap was put on below the bottom reducer so the pipe and cap spins at the bottom of the center T-connector.



A short crank arm made of aluminum stock is attached to the motor.

This arm was built using the same technique as is used in Phantasmechanics's FCG. Another piece of aluminum stock is used to make an arm that is attached to the 1/2" neck pipe.

A third piece of stock is used to loosely connect the two arms. This linkage changes the rotary motion of the motor into a reciprocating (back and forth) motion of the arm attached to the 1/2" pipe.

You can adjust the amount of turning motion by varying the length of the arms. (The large washer on the motor arm was not used for this prop.)



The lower arm is made of lightweight aluminum stock that was bent around the 1/2" PVC and attached with a screw and nut. In this picture, you can see how the 1/2" pipe is going thru the 3/4" reducer into the T-connector. The 1/2" pipe must be loose here. The reducer just acts as a guide. The end cap (which is hidden from view) provides the spin point at the bottom.



The other end of the lower arm is connected with a short bolt and lock nut with washers on both sides and in between. This connection must be loose enough to allow ease of movement.



The 1/2" PVC "neck" is guided thru the 4-way connector with another 3/4" reducer. Once again, the reducer just acts as a guide. The 1/2" pipe must be free to turn at this point. Both of the reducers are dry fitted into the connectors so they can be removed if necessary.



The mask for the project is called Green Swamp Witch. A pair of Monster Hands were painted by Death Studios to match the mask.



A styrofoam wig head provides the support for mask. I stuffed plastic supermarket bags into the gaps between the head and the mask. A short piece of 1/2" PVC pipe was inserted at an angle into the foam and glued in place.

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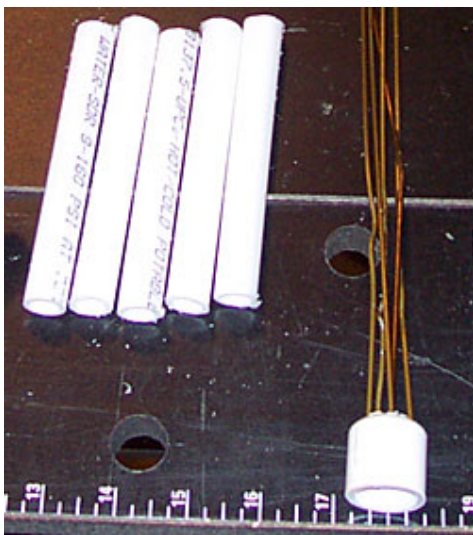


I used a 1/2" PVC connector to join the PVC "neck" on the frame to the pipe that was glued into the wig head.

I trimmed a few inches off both pieces of pipe to get the proper length. The connector between the two was dry fitted and taped to allow easy removal and adjustment of the rotation of the head.



Plastic pipe was used to create a skeletal hand that would be placed inside the latex hands. I used a method based on Merlin's Corpse Hands to create the hands.



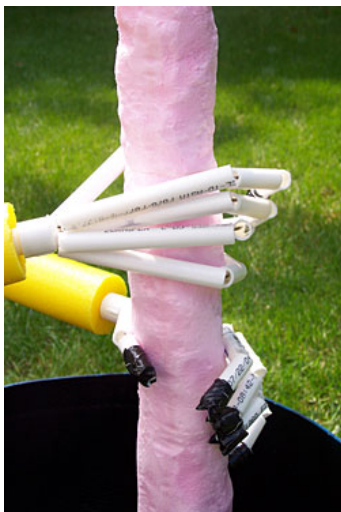
I drilled 5 holes in a 1/2" PVC end cap. This cap would be attached to the lower PVC arm. Using the latex hand as a guide for the length, I cut five pieces of wire for each hand. I made a u-shaped bend at one end of each piece of wire to keep it from pulling thru the hole in the cap. I then slid a piece of wire into each of the holes. I used a flexible water pipe to create the "bones" of the skeletal hands.



The 1/4" diameter of the pipe was about the size of the fingers in the latex hand. Again using the latex hand as a guide, I cut pieces of the pipe to match the approximate length of each of section of a finger between the joints. There were four pieces of pipe for each finger and two sections for each thumb.



The appropriate pipe sections were then threaded on to each wire and the wire was bent over the outside of the finger tip and cut off so 1/2" of wire was showing. Black duct tape was put around the end of each finger tip to secure the wire and to protect the latex hand from the wire when it was inserted.



After the skeletal hands had been completed, I tested the "grip" around the stirrer. The wire allowed the hand to conform very well.

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The forearm was made of 1/2" PVC and hollow foam just like the upper arm. The hands were attached using the end caps which held in place with duct tape for easy removal.



The skeletal hands were inserted into the latex hands which gripped the stirrer very well. To make sure the hands would not slip I used a piece of thin wire around the thumbs to secure the hand to the stirrer. The wire was hidden by the fingers in this front view.



The bulk for the "body" of the witch is provided by poultry (or chicken) wire.

This material is very easy to work with and is secured to the PVC frame with short pieces of wire.

I wanted a "hunched" look for our witch so I formed the wire into a hump in the back. I also bulked-up the shoulders and upper arms with some bubble-wrap secured with masking tape.



There has to be enough clearance in the wire form to prevent the turning motor crank from catching. I made sure there was enough room by attaching a bent piece of aluminum stock to the motor mount. The wire form could not be pushed past the aluminum.



I bought large pieces of cheap fabric to dress the witch. I used dark brown for the body and black for the arms. The fabric was attached with safety pins to the wire.

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There was no need to do any sewing for the body. The fabric was draped and pinned in place.

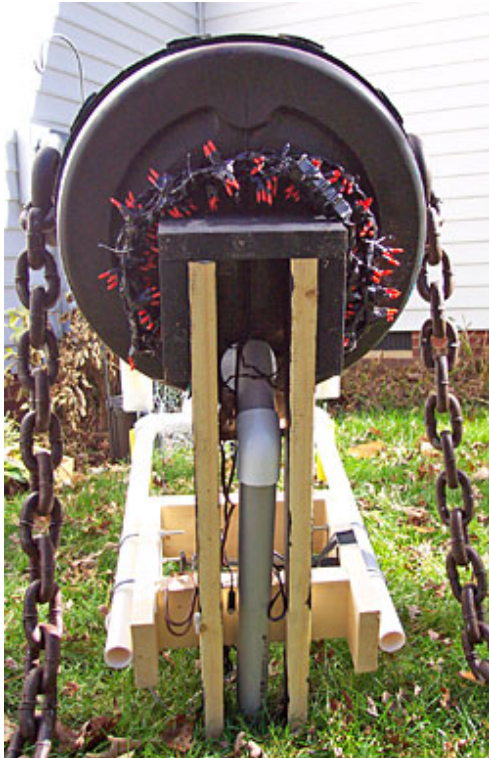


For the arms, I did run a single seam the length of the fabric so it would stay on during the stirring motion. The arms were just pinned to the wire at the shoulder. I also draped a piece of fabric cape-like over the top and secured it with safety pins.

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The final bit of clothing was a star-and-moon patterned piece of cloth and was draped like a shaw over the witch's shoulders. I made sure there was no binding of the neck materials and the mask.



This bottom view of the entire frame shows a gray pipe running from the back of the prop to the hole in the bottom of the cauldron. This allows fog to be piped up into the cauldron to produce a steam-like effect. A 45 degree elbow was used to turn the fog up into the cauldron

Obtained from
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As small 400-watt fogger with a timer provided the "steam". The fog was directed straight into the gray pipe from the fogger. I attached a power strip to the wood frame and routed all the plugs to it. For sound effects, a powered speaker and portable CD player was also mounted in that area.



Here is the finished prop in its place on our front porch during daylight hours last Halloween.



And here is the prop as it appeared last Halloween night. This photo was taken with a flash so it does not show the actual lighting.

You can check out a movie of the prop as it appeared that night in the section below. The sound effects were created with Sony ACID Pro 5 and a seamless loop was recorded to a CD.

Obtained from
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