Casters

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Types of Casters

To begin with, Roger showed us different kinds of casters: metal, double rubber, and single rubber. While it is possible to install new or used metal casters, Roger prefers the Darnell double rubber casters available from Schaff Piano Supply. For extra heavy uprights, he installs the heavy-duty double rubber casters that he orders directly from Darnell.

Tools Required

- Casters
- Hammer
- Heavy-duty drill
- Drill bits, spade bits, hole saws
- Large Forsner bits
- Loctite Steel Putty
- Screws

Installation Procedure

- Measure and assess
    - How far can I recess the hole? The limiting factor is the space required for the caster to swivel.
- Drill
- Drilling the hole to make it bigger can get tricky.
    - Install a hole saw on a large drill.
    - In order to drill the hole bigger and keep it centered, use the small hole as the guide.
    - Roger places a drill collet into the hole.
    - If the hole is too small for the collet, insert a step drill into the hole to determine how far into the hole to use. Do a test-try to determine how far: usually it takes two or three steps.
    - Place a spring on the centering bit to prevent the collet from sliding back and getting stuck inside the hole saw.
    - To drill out the narrow inner hole, mark the thinner hole saw bit with masking tape. Pre-determine how far to go by measuring the caster post.
- Deepen the inset hole.
    - Once the hole saw has cut the circle, the inner portions of wood must be knocked out with a chisel or screwdriver; this will leave an uneven surface. Instead, once a little bit of wood is knocked out, use a large Forsner bit that matches the diameter of the caster plate and the size of the column.
    - Use a second Forsner bit the size of the stem, for the inner hole.
- Rotation clearance
    - Now that the hole is done, the next problem is that the bottom panel comes up close enough to the hole that the caster won't rotate. We must figure out

the radius to chew out. Roger made a jig to create a circle around the center point of the stem hole. A dowel inserts into the socket, and a pencil is inserted into the swivel part of the jig. Scribe a circle on the bottom of the piano to delineate the area to be cut.
    - Is the hole crooked? Roger inserts a dowel into the socket and uses a square against the dowel in both directions to check the angle. Use the Forsner bit to correct any inconsistently. This will prevent the piano from rolling crooked.
- Often the stem is slightly smaller than the size of the stem hole. To shrink and size the hole, Roger bought Steel Putty, stock number 9913, which is a black base and a silver hardener. This will make a nice tight fit. The only disadvantage is that you don't want to tip the piano back up to position until the putty dries. To solve this, tilt the piano back up onto a couple 2x4's that can be removed later once the Steel Putty is set.
- To install the caster, pound the caster in at the stem, not on the wheel. Use a punch.

Relocating Casters

There are a few times when you will want to mount the new caster in a different spot than where the old one was. The flange on the socket might be on the very edge, or the wood could be all chewed up where it was before. Roger made an aluminum template for duplicating the size and location of the column hole. He screws this template temporarily onto the bottom of the piano and uses it as a guide for his hole saw. To center the inner hole, he places a washer into the template to guide the smaller hole saw.

To cut out the curve so the wheel can swivel, Roger has a big circular saw in his shop. He takes the panel off and cuts the circle. In the home he uses a die grinder with an electric motor. The bit he uses is a wood cutting bit. The cutting surfaces for wood are few in number, whereas the blades on metal bits are closer together.