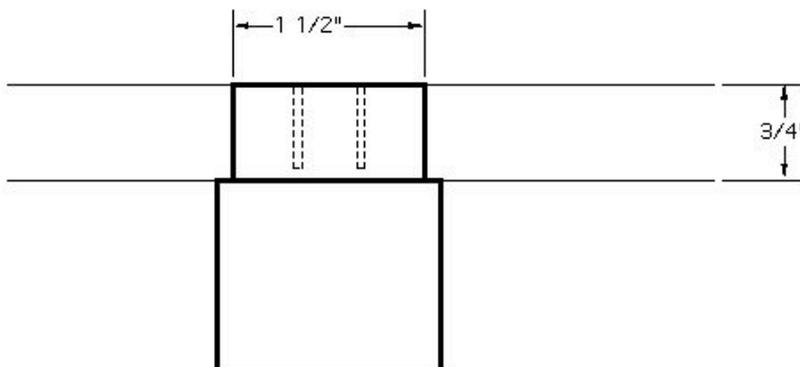
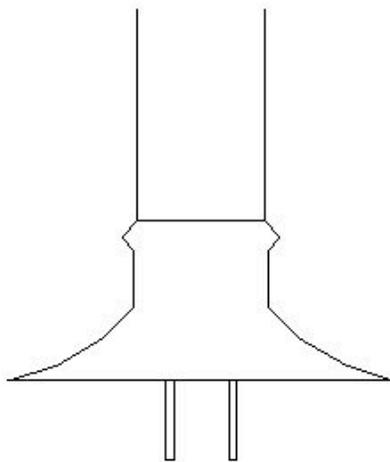


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Tech Note- Lighting Effect
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Stage Plug Candles

For a production of *Batboy: the Musical*, the Musical Theatre Guild needed practical candles that met a very specific restriction: they needed to turn off during blackouts. This made simple battery operated practicals impossible, and wireless dimming solutions were well beyond our budget (and size restrictions might have been limiting regardless).

Fortunately, other specifications were lax: Our designer didn't require complicated multi-source flickering. The candles needed to be carried on stage but weren't "lit" until they had been placed. This allowed us to implement the solution sketched below.



Our design involved quick modification of standard decorative candles so that the male plug extended immediately out of the base. These were mated with Edison female connectors mounted flush inside the lids of platforms in each location a candle was to be placed.

The operation was simple: Meredith (Batboy's mother) would come on stage carrying three candles in a dim ambient wash. As she placed each candle on a corner of the stage it would be plugged in, and before leaving she would make a lighting motion, at which point the light board op would turn on the appropriate circuit. In our specific implementation the candles were run from a portable dimming pack rather than the main dimming system, so the most complicated part of the operation was coordinating cueing with the backstage smaller emergency backup board op.

A few construction details were crucial for smooth operation:

- 1) We were able to locate commercially available female Edison connectors with a cylindrical section exactly 1.5" in diameter and .75" deep, which then expanded to a larger cylindrical housing. After hole sawing 1.5" diameter holes in the 3/4" plywood platform lids, each connector fit easily but snugly enough that it needed no further attachment. In one case a half-wrap of gaffers tape snugged the fit perfectly.
- 2) Our candles started with polarized male connectors. A little grinding turned made the two prongs identical, and we slightly beveled the corners for ease of plugging in. With only this slight modification, our actress never had trouble plugging the candles in smoothly in very little ambient light.
- 3) The attachment of the male connector to the candle base is the trickiest part of the construction- we proved that a pile of hot glue will create candles that are sturdy enough for a few weeks of use. In candles intended for longer term use it would be advisable to use high quality epoxy and an appropriate filler material, or to attach the connector to a new base plate made of thin material that completely covered the opening at the base of the candle.

It should be possible to modify this design to create a dual-system candle that can be used "wirelessly" on battery power, and plugged in for dimmer control. This would greatly increase the range of application of these props.