

# DANCING PANTS!

An articulated mannequin form for mounting costume.

**BACKGROUND:** Katharine Hepburn was a groundbreaking style icon whose refusal to play by the rules of fashion helped to bring slacks and suits into acceptability for women's wear in the 1940s and 50s. She contended that one could do things in slacks that weren't possible to do decorously in a skirt, once saying "I realized long ago that skirts are hopeless. Any time I hear a man say he prefers a woman in a skirt I say 'Try one. Try a skirt.'"

In developing an exhibition of her stage and film costume, now in the collection of the Kent State University Museum, we wanted to showcase the humble khakis which were her signature look on and off screen. The problem was to create a form to display numerous pairs of trousers in a way that was visually interesting and conservationally sound. We called this project "Dancing Pants."



## Goals:

- Ability to pose the form after dressing
- Archival quality materials
- Replicate human flexibility to extent possible
- Locking hinges so mount would hold position
- Ease of use for potential travel to other venues
- Use off-the-shelf materials where possible to minimize cost.

## Challenges encountered:

- Replicating the action of the human hip
- The power of levers! (Curse you Archimedes!!)
- Finding rotating, locking mechanisms for other joints
- Balancing and bearing weight on only one foot
- Stress on the fixed ankle joint



Since the exhibition we have been continuing to evolve the design based on what we learned.

The plastic hinges are best suited for seated poses, and metal hinges and tubing work best on standing mounts to counteract the leverage of a raised leg. We eliminated the rotation potential of the hips by assembling that joint via welds vs. fasteners. This raised costs, but we are happier with the outcome, and the metal can also withstand a torso's weight.



## COMPONENTS:



### KNEES, ANKLES, ELBOWS:

Variloc hinges from  
Adjustable Locking Technologies

Plastic: VGN10PB

Metal: VAL10PB

### BONES:

3/4" EMT Conduit (metal hinges)  
or 1.5" x 1.5" wood (plastic hinges)

1-1/2 to 1" shrink tube

1/4-20 pan head machine screws

1" acrylic tubing (arms)

LocLine hose with armature wire (spine)



### HIPS

Hard maple blocks

Plywood facing

1" steel balls

1/4" steel rod

1/4" x 7/8" steel bar

Threaded Inserts and 1/4-20 set screws  
pipe hanger

### PADDING

Ethafoam (2" and 3")

Polyester Batting

Stockinette

Fosshape (torso)

A brief guide to this design is available on our website at [www.kent.edu/museum](http://www.kent.edu/museum) (look for the link on our home page). If you have additional questions after the conference, you can reach me at [jwilli52@kent.edu](mailto:jwilli52@kent.edu), or 330-672-0304.