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**The Theatre School's Prop Master Builds a Rotational Casting Machine**  
*The Technical Side of a Famous Scene is Made Possible – with Brightly Colored Innovation*

For The Theatre School's upcoming production of *A Streetcar Named Desire*, **Wayne W. Smith** (Properties Master, Safety Officer and Assistant Technical Director for The Theatre School at DePaul University) was faced with the challenging task of making a bottle that will appear to be made of glass, and will break easily without creating sharp edges. The answer to this dilemma comes in the form of "breakaway props" that imply violence on stage, but, in reality, keep the actors and crew safe. Smith's solution, rather than spending upwards of twenty-dollars per breakable prop and having them shipped from a shop in Los Angeles, was to build a machine for The Theatre School in Chicago that is capable of producing the same product.

The scene that calls for this type of ingenuity is one that has entered the national memory of film and stage life. In the final stand-off between Blanche DuBois and Stanley Kowalski, the violence that has been underlying their relationship throughout the play erupts into a vivid physical struggle. It is well known that during this scene, Blanche grabs a glass bottle, breaks it, and threatens Stanley in an effort to defend herself. What is not well-known about this scene is the expertise it takes to make these stage actions possible. Determining how to move forward safely, while keeping an eye on production costs, is not something that most people consider immediately upon reading or seeing a production of *A Streetcar Named Desire*. Yet, as with many behind-the-scenes aspects of the theatre, there are people whose expertise lies in this sort of scene dissection and the mastery of technical skills. One of those people is **Wayne W. Smith**. The following is an interview between Andrea Tichy (Manager of PR and Special Events for The Theatre School) and Wayne W. Smith, regarding the cost, benefits and process for making a new breakaway prop machine.

**What do you call this machine, and what does it do?** *The machine is a rotational casting machine. It is used to rotate a casting mold in two directions at the same time. It is a necessary process to create a hollow casting, as in a bottle.*

**How did you decide that you should build one, rather than purchasing the items?** *One word: cost. Each bottle would cost \$20.50 or more. By casting them ourselves, we can get the cost down to \$6.00 a bottle, plus the cost of the mold [\$50.00]. We also needed breakable shot glasses for another scene. I could only find one source for those and they were \$15 each plus a twenty percent handling fee. I am making them for less than \$3 each. They do not require the machine, but use the same plastic. Once we have the machine to cast cost effective breakaway glassware we can produce other items in the future.*

**How did you go about building the machine, and the molds?** *This may seem simplistic but I just thought about it for a couple of weeks and developed the design in my head. A little bit of drafting to work out some dimensions, an old speed-controlled motor we had kicking around for 25 years, and \$400 worth of parts from McMaster Carr and we were ready to go. With some help from a work study student, the metal parts were cut and drilled in less than a day. I welded the parts together and assembled the machine in about another day.*

*The mold took a couple of days because of set-up time for the silicone and the urethane. The first step was to coat a glass whisky bottle with a flexible silicone rubber. Once that cured overnight, I had to build what is called a mother- mold. The mother- mold is a two- part hard mold used to support the soft silicone mold and also includes the hardware to mount the mold into the machine. Once the mother- mold is set, it is opened and the soft mold is removed and sliced half way so that the original bottle can be removed.*

**Were there any unexpected issues or steps along the way to making this work?** *Are you kidding? Yes there were issues. One was the ratio of the rotation between the two frames. At first I had the two frames rotating at the same rate. This produced 1/2 bottles so I had to change the gear ratios on the inside frame. That was an easy problem to solve, once I figured out what the problem was.*

*Another issue is the cork for the mold. I have to have a way to pour the liquid plastic into the mold but I need to close the opening up before the plastic runs out while it is rotating. I tried several different materials for the cork and finally succeeded with a simple #5 rubber stopper used in chemistry labs.*

**Any other thoughts you want to share about your creation?** *I would not suggest most people try this on their own. It is a difficult process with a lot of issues to consider. The plastic involved requires the use of an organic gas cartridge respirator and strong ventilation while it is being mixed and curing. I am still learning about this process and it will require building several more molds and casting a lot more pieces before I would say I am proficient at*

*this process. Also, I'd like to say that breakaway props imply violence on stage. It is important to have a qualified fight choreographer when a production includes such items.*

The product of Smith's work and machine can be seen at DePaul's Merle Reskin Theatre, during *A Streetcar Named Desire*, written by Tennessee Williams and directed by Damon Kiely. The production opens Friday, October 3 and runs through Sunday, October 12, 2008. Performances are Wednesdays through Saturdays at 7:30 PM and Sundays at 2 PM. Previews are on October 1, and October 2 at 7:30 PM. Tickets are available by calling the Box Office at (312) 922-1999.

For information about the production staff, cast and more – visit <http://theatreschool.depaul.edu>. **Interviews, media comps, and photographs are available upon request.**

**Wayne W. Smith** (*B.F.A., University of Illinois-Urbana*) has produced properties for all of the productions at The Theatre School for the past twenty years. He has also worked on properties for the Goodman Theatre, Chicago Children's Theatre, Court Theatre and the International Theatre Festival of Chicago. Wayne specializes in searching for solutions to technical stage problems by investigating a wide variety of materials and processes. He is active in both the national and Midwest sections of the United States Institute for Theatre Technology. Wayne is also the Safety Officer of The Theatre School and serves on the Staff Council.

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*The Theatre School at DePaul University, founded as the Goodman School of Drama in 1925, educates, trains and inspires students of theatre in a conservatory setting that is rigorous, disciplined and culturally diverse. The school and its students strive for the highest level of professional skill and artistry. A commitment to diversity and equality in education is central to its mission. As an integral part of the training, The Theatre School produces public programs and performances from a wide repertoire of classic, contemporary and original plays that challenge, entertain and stimulate the imagination. The school seeks to enhance the intellectual and cultural life of the university community, the city and the profession.*