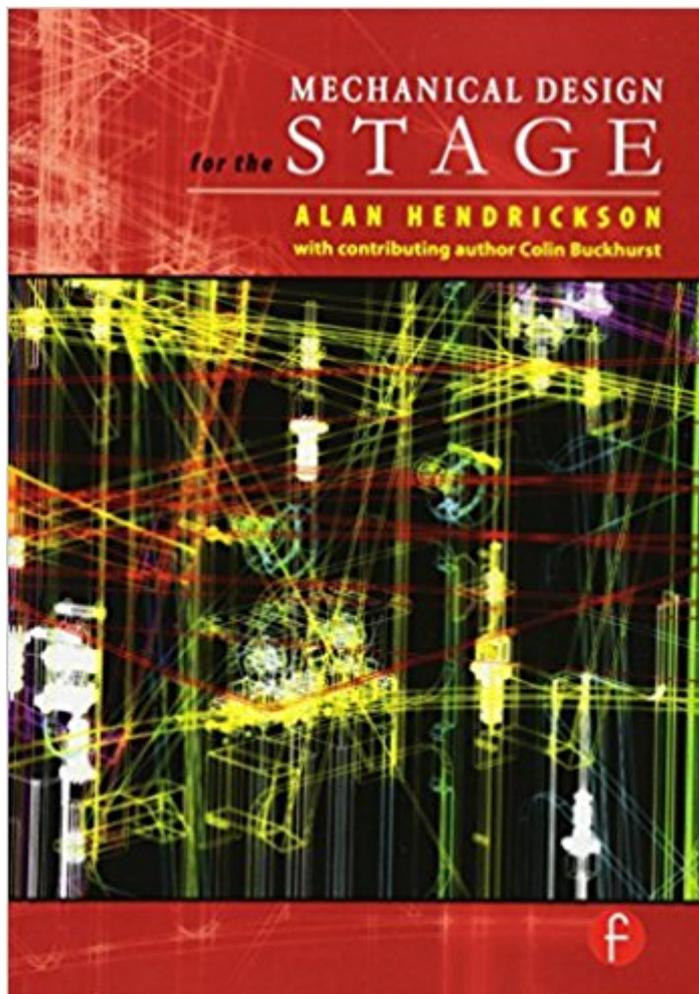


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# Mechanical Design For The Stage



## Synopsis

Scenic effects involving rotating turntables, tracking stage wagons, and the vertical movement of curtains and painted drops have become common in both Broadway and Regional theatre productions. The machines that drive these effects range from small pneumatic cylinders pushing loads of a few pounds an inch or two, to 40 horsepower winches running multi-ton scenery at speeds 6 feet per second or more. Usually this machinery is designed by theatre technicians specifically for a particular show's effect. Compared to general industry, this design process is short, often only a few days long, it is done by one person, design teams are rare, and it is done in the absence of reference material specifically addressing the issues involved. The main goal of this book is to remedy this last situation. *Mechanical Design for the Stage* will be a reference for you that will:

- \* provide the basic engineering formulas needed to predict the forces, torques, speeds, and power required by a given move
- \* give a technician a design process to follow which will direct their work from general concepts to specific detail as a design evolves, and
- \* show many examples of traditional stage machinery designs.

The book's emphasis will be on following standard engineering design and construction practices, and developing machines that are functional, efficient to build, easily maintained, and safe to use.

## Book Information

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## Customer Reviews

Alan Hendrickson is a Professor (Adjunct) of Technical Design and Production at Yale School of Drama, and an independent consultant in scenery mechanization and control since 1984. Classes

taught at Yale include Physics of Stage Machinery, Automation Control, Pneumatics and Hydraulics, and Mechanical Design for Theatre Applications. His outside consultant work includes hydraulic, control, and mechanical design for effects running on Broadway, national tour, and regional theatre shows, mainly through Hudson Scenic Studio.

There's a lot of good information here, and the simplified physics in the first 12 chapters is fairly well done. However, a lot of text could be saved by inserting a single caveat that trivial effects will be ignored. Do NOT buy this for your Kindle. Most of the drawings and equations can't be zoomed. In particular, the labels on drawings are mostly impossible to read. Aside from that, there are some errors in the equations that can be read. For a fairly pricey book, intended (according to the author) to be used as a text, I'd expect better quality. For example, early in chapter 5, an equation appears:  $F_{\text{lifting}} = F_w \sin(\theta)$ . The text goes on, "As the minus sign in the formula implies, ...," but there is no minus sign in the formula.

Good information. Pictures and explanatory graphics. Ideal for understanding the backstage of a theater. Thanks for the info shared.

Great product. Good source of information for beginners to advanced. I highly recommend this book for anyone interested in all the details of stage mechanics

Great reference book.

This is a great mechanical guide and for stage &/or film it's a very practical guide to the use of equipment when SAFETY is a large use consideration. Even for someone like me with limited mechanical expertise this guide is a benefit. And it's also useful in stage and set construction needs beyond just design.

This was a Christmas present for my stepson (the technical director for a college theater program). He's always reading up on things related to his work. He knows his stuff and loved this book!

This is the best book ever written on mechanical design for stage applications... it covers so much! If you are designing and building any stage machinery then the book will pay for itself by helping you to solve problems in design before you are beating your fists against a piece of stage machinery

that isn't working. What a helpful tool! A must for every technical director! Alan is a super genius!

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