on the trail of

rigging history

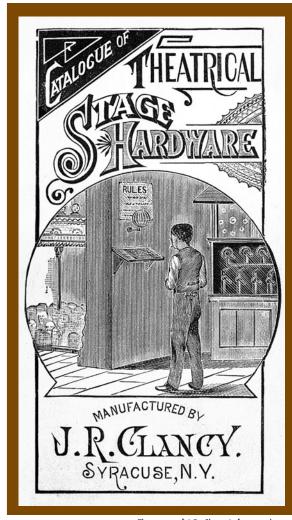
125 Years of J. R. Clancy Catalogs

by TOM YOUNG AND RANDI MINETOR

The New York Times' September 19, 1882, review of the traveling melodrama *The Romany Rye* could not have been more scathing.

"It is stupid, stale, and dull until its fourth act is reached, and that act is extravagant and repulsive," said the unnamed critic. The writer went on to describe a scene in which the hero and his wife face high waves that crash upon the shore behind them, "battling for their lives amid this pasteboard brine."

The play has long since faded into obscurity, but one company will never forget it. The arrival of *The Romany Rye* in 1882 at a theatre in Syracuse, NY, became the catalyst for innovations in stage rigging that would change the life of a local stagehand named John R. Clancy.





The cover of J.R. Clancy's first catalog in 1886, and a page from its 1889 catalog which touts its "Calcium Lights for theatres, balls, tableaux, lawn parties, stereopticons, etc."

Clancy could see that the rigging currently available at his theatre would never manage to raise and lower the fantastically complex scenery the production required. Laboring in his home workshop, Clancy devised a series of heavy-duty pulleys, sheaves and other inventions that would make the scene changes possible. The traveling company understood his ingenuity immediately, and when they moved on to the next city in their tour, they bragged about the clever rigging inventor whose solutions saved the show. Letters requesting his specialized rigging poured in from theatres across the country.

By 1885, John Clancy fully understood the opportunity before him. He went to work creating unique, functional designs for additional stage hardware, and put all of his products into a catalog in 1886. He distributed the catalog to theatre owners and managers in every community that he could reach.

J. R. Clancy, Inc., would rise to become the leading theatrical rigging firm in the United States—and John Clancy's catalogs tell a fascinating story of technological evolution, from blocks and hemp to automated hoists and computerized control systems.

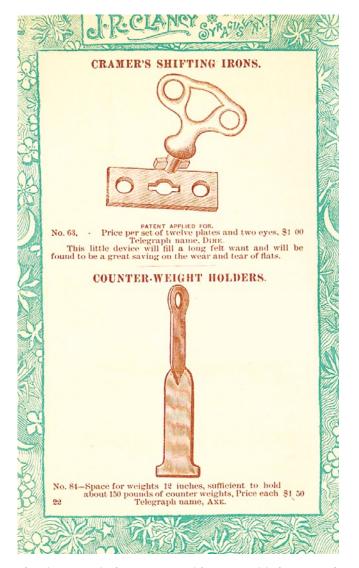
Today, these catalogs are available in digital form exclusively through USITT, in acknowledgment of J. R. Clancy's forty-five-plus years as a member of this organization. In celebration of J. R. Clancy's 125th anniversary year, the company has scanned and digitized every page of every catalog for use by students, faculty members, and other researchers.

The catalogs do more than illustrate a slice of history, however. They also mirror the story of the entertainment industry's growth and development against a backdrop of American experience. In good times and bad, from the financial panic of 1893 through the crises of 2008, live theatre continued to thrive—and J. R. Clancy led the industry, both in technical innovation and in the straightforward, utterly honest operating philosophy John Clancy established from the beginning.

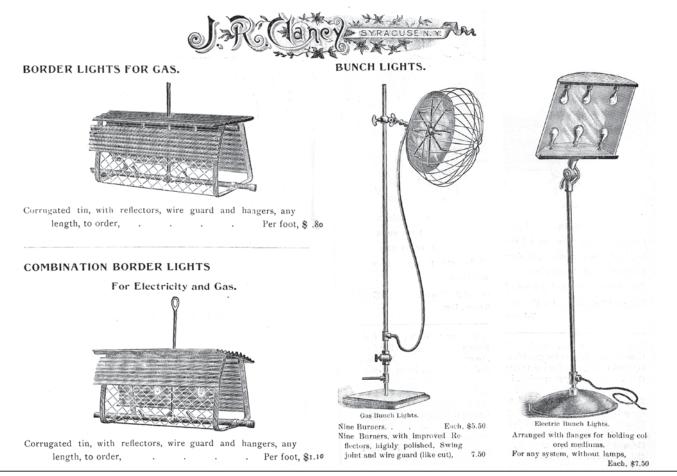




Clancy's patented Movable Head Block and a galvanized malleable iron swivel block, both from the first catalog (1886).



A page from the 1890 catalog features "Cramer's Shifting Irons" and the first mention of a counter-weight holder, the precoursor to the arbor used in counterweight systems today.



The 1893-94 catalog features border lights and bunch lights in both gas and electric versions.

Beyond the hardware store

In 1886, stage rigging consisted of pulleys, ropes and bits of hardware purchased from a hardware store. With many of its principles derived from sailing ships, rigging did much the same kind of job backstage as it did on naval vessels: It hoisted large, wide sheets of fabric, with the end result an unfurled backdrop instead of a billowing sail.

As scenery moved from drops to solid wooden portals and flats, however, riggers needed more rugged hardware to do the job. Clancy's first catalog offered a long list of products that could stand up to heavy-duty backstage use: John Clancy's designs for stage screw eyes, brace hooks, irons, and cast-iron sheaves and swivel blocks. He also invented the world's first movable head and loft blocks, creating a flexible solution that allowed stagehands to shift the position of a line set as the production required.

Clancy made many excellent products, but he was also a shrewd businessman. He began each of his catalogs with a personal letter, written in a florid style that would soon become his trademark. In his letters, he offered "members of the Amusements Profession" the use of his offices, with desks and stationery provided for their convenience. Clancy assured his readers that everyone who purchased his equipment would be treated fairly and equally.

"I am not, as rivals have reported, selling goods at or below cost, on the contrary I give all notice that I am making a fair living profit on all goods that I manufacture," he wrote. "Our prices are like the laws of the Medes and Persians, unalterable until further notice, with no deviation under any circumstances, with no inside track for anybody, but the same prices to one and all."

Clancy's business grew like wildlife as theatres across the country received his catalogs. "I beg to say that in endeavoring to avoid being over-flushed with success, I have spared no expense in improving my goods and designing new styles, and am gratified to know that they have now won their deserved popularity," he wrote in 1887. "Youthful vigor combined with wise management is my boast, and realizing that even the strongest can be overthrown, I shall ever aim to convince you by my dealings that I am your faithful servant."

Just three years after his first catalog

arrived at theatres, manufacturing processes and materials began to mature and change at J. R. Clancy. The 1889 catalog tells us that stage screw eyes were now made from steel instead of iron, making them stronger and lighter weight. Clancy tested many kinds of hardwood for his stage braces, and finally chose seasoned spruce for their construction.

Perhaps most interesting, J. R. Clancy offered a line of calcium lights "for Theatres, Balls, Tableaux, Lawn Parties and Stereopticons." Calcium lights—more colloquially known as limelight—used an oxy-hydrogen flame and cylinders of calcium oxide to generate an intense, bright beacon. J. R. Clancy continued to carry components for these lights well into the age of electricity.

By 1891, Clancy's inventory of gas lighting equipment grew to include border lights, bunch lights—nine burners with a reflector—footlights, ground rows, and wing lights. John Clancy carried every piece of apparatus required to run calcium lights, and—predicting the advent of electricity—he stocked an expanding wire guard used with incandescent electric lamps.

SIDE PULLEYS

JAPANNED

For Small Drops and Curtains

These Pulleys are made especially for halls not having a "Gridiron," and where it is necessary to work drops from the batten.



No. .75, Single, with Sheave 3x5/8.....each, \$.35 Telegraph name, LEAS



No. 175. Double, with Sheaves $3x\frac{5}{8}$each, \$.50. Telegraph name. LEFRO



No. 0075. Single, with Sheave 2½x½.....each, \$.20 Telegraph name, MOLINE



No. 075. Double, with Sheaves 21/2x1/2.....each, \$.30 Telegraph name, MARO

FLOOR STAYS FOR LEG DROPS



No. 86. Galvanized.....each, \$.15 Telegraph name, LEHI

19

HOOK AND EYE TURN BUCKLES

GALVANIZED



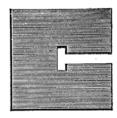
No.	79.	Size, ¼ incheach, Telegraph name, ACT	\$.50
No.	179.	Size, % incheach, Telegraph name, ADD	.65
No.	279.	Telegraph name, ADD Size, ½ incheach, Telegraph name, ADZ	.90
No.	379.	Telegraph name, ADZ Size, % incheach,	1.20
2.0.	0.0.	Size, % incheach, Telegraph name, AFT	



COUNTERWEIGHT **ARBORS**

No. 84. Space for weights 12 inches, sufficient to hold about 150 lbs. of counter weights....Price each, \$.40

Telegraph name, AXE



COUNTER-WEIGHTS

No. 584. 7x7x1 in., weight about 12 lbs... Price per lb. \$.02½ Telegraph name, **RIPI.E** Y No. 684. 7x7x2 in., weight about 24 lbs... Price per lb. \$.02½ Telegraph name, **RIPON**

Ceiling Plates, with! Ring GALVANIZED

No. 987x2½ inches...each, \$.15 Including bolt and wing nut Telegraph name, **PETERS**



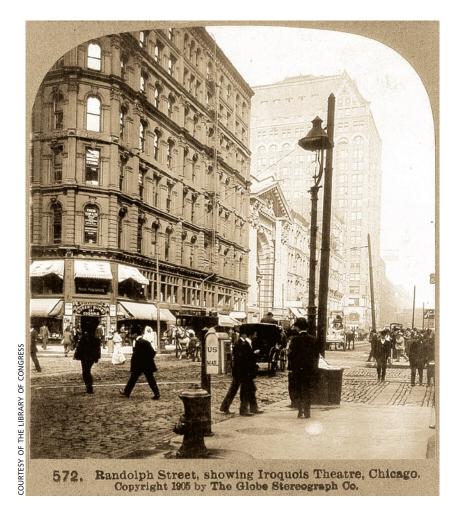


WOODEN DEAD EYES

No. 570. 13/8x1 1-16x11/4x1/4 inch holePrice each \$.05

Telegraph name, RACHEL

A page from catalog no. 19 (1903-04) shows some hardware still in use today.



While we can guess that counterweight rigging was already used in some form in the latter half of the nineteenth century, the first evidence of this in J. R. Clancy's catalogs occurred in 1890. In this catalog, John Clancy offered a counterweight holder—not unlike the arbors in use today—that could hold up to 150 pounds.

"Our hardware made seven years ago is not the equal of that of to-day by a very long reckoning," Clancy wrote in his 1891 catalog, "nor is that of three years ago, or more than one year ago, by diminishing differences, but we make with confidence our claim that at each stage of progress our products have been in the van [1890s slang for 'in the lead']."

It's hard to imagine today that much innovation was required for hardware like pulleys and sheaves, but John Clancy and his engineers worked constantly to create more practical forms of these basic products. In 1892, the company introduced side pulleys and screw sheaves, for use in rafters in halls with no gridiron. Loft's Drop Holder became a catalog staple, a holder to keep a partially rolled drop in place. Depression can't keep theatre down

In 1893, a major depression swept through the United States, causing the worst financial panic in the nation's history to that date. It began with a scenario that's hard to imagine today: a problem of under-consumption, in which the economy was producing more product than people were buying. Storms, drought and overproduction stalled agriculture and sent prices tumbling, while investment in railroad building slowed. Businesses took an enormous hit, especially in manufacturing. Worker strikes were violent and costly, and unemployment exceeded ten percent for more than five years.

Yet the market for technical theatre products continued to grow, even in the face of hard economic times. Clancy added products to his catalog, including iron strapped curtain guides and Wilding's patented easy trim clamp, for attaching sandbags on drops as counterweight.

"Despite the so called 'hard times,' our trade has increased fully thirty-five percent," John Clancy wrote in the 1893 catalog. Over the next several years, he would expand his company's offering to include stage plugs and

sockets for connecting electric bunch lights and ground rows, and Hoover's Improved Latch, a device that could latch flats together quickly and securely without laying them down on stage.

This was also the year in which Clancy developed a relationship with a technical director who would become one of the leading stage rigging innovators of the late nineteenth and early twentieth centuries. Claude Hagen served as the technical director for The New Theatre and the Fifth Avenue Theatre in New York City, and his experience in mounting complex productions led him to invent hardware to solve all kinds of challenges. He and John Clancy worked together to introduce many of the components of the counterweight rigging system we still use today.

J. R. Clancy's 1903 catalog—the first issue to require an index—offered 12-pound and 24-pound counterweights and an arbor to hold them in place. Over the next decade, the components that made counterweight rigging safer would begin to appear one by one, as the total system gradually came together in the minds of its inventors.

Innovation on fire

On December 30, 1903, a single event would change the way theatres operated forever. The Iroquois Theatre on West Randolph Street in Chicago, newly opened just a few weeks before, had already been cited by Fireproof Magazine for a number of potential fire hazards: the absence of a stage draft shaft, exposed wood in the construction of the proscenium arch, and a marked deficiency in the number of exits the theatre provided. Worse, the theatre contained large iron gates to prevent audience members in the gallery (balcony) from moving down to more expensive seats. Narrow fire escapes, confusing pathways from the stage house to the exits, fire exits hidden behind draperies, and complicated locks on the outside of exit doors made this theatre a disaster waiting to happen.

Happen it did: During a sold-out matinee performance of *Mr. Bluebeard* on December 30, an arc light shorted out and ignited a muslin curtain. The fire ran rampant into the fly gallery, touching off the highly flammable painted canvases above and sending the fire through the rafters. The asbestos fire curtain snagged and could not be lowered. Opening the double freight doors at the back of the stage turned the blaze into a rolling fireball that roared through the top portion of the house. Panicked patrons, trapped in the gallery by the iron gates, were



THE first requisites necessary for a model factory are Light, Air, Safety and Comfort of the occupants. Our buildings have proved successful in furnishing all of these. They are fireproof, concrete structures set in a frame of lawn, trees and flowers on an ample plot of ground.

Raw material is received in carloads at the rear. Passing through the Stock



Room, it then enters the Machine Shop, where it is inspected, and goes on through the various machines until every individual operation is completed, after which it passes to the inspectors, who check each particular piece.

Our Machine Shop contains a vast quantity of the most modern machine

3

burned to death, trampled, or asphyxiated. Estimates say that 575 people died in the fire, while another 30 died the following day of burns and other injuries.

Deeply moved by this tragedy, John Clancy and Claude Hagen set to work to devise "the most perfect method of hanging and operating both asbestos and act drop curtains," according to the 1904 catalog. Demonstrating the company's commitment to health and safety, Clancy offered the working drawings for this patented system free of charge—a policy that has not changed to this day. The plans called for automatic release of the curtain, "the value of which has been demonstrated in several of the most modern New York Theatres, in which it has been approved by the Building Department and Board of Underwriters of that city," the catalog noted.

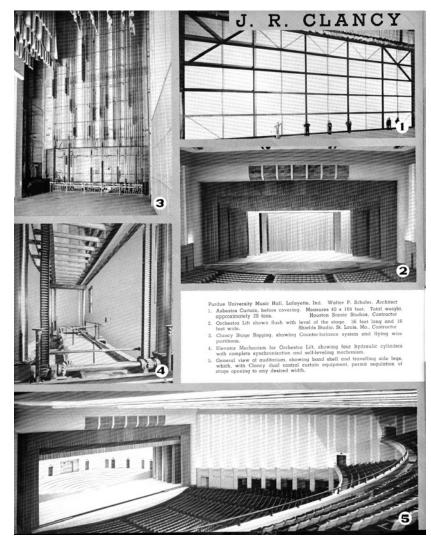
In the same catalog, J. R. Clancy, Inc., introduced a line of fireproof curtain blocks. "Sheaves of sufficient size to prevent crystallization of wire rope are used," John Clancy wrote. "An unusually fine pulley that will double or treble the life of the rope is more economical than a small or cheap block...the question of friction should also be given due consideration, as these blocks are generally situated in inaccessible position where to oil them is difficult, some times dangerous and never inviting." J. R. Clancy factory-tested these blocks on a load of 2,200 pounds, running almost constantly for eight hours a day for nine months without oiling.

Asbestos in fire curtains has long since been replaced with modern materials including Zetex, but the essential elements of any theatre's fire curtain system continue to be some of J. R. Clancy's most popular and dependable products.

Rigging's industrial revolution

In 1912, John Clancy embraced the tenets of the worldwide industrial revolution and brought the best of its practices to Syracuse. The 1912 catalog was chock-full of photos of the brand-new, sparkling clean, well-lit, and remarkably well-equipped plant—a facility that bore no resemblance to the notorious sweatshops run by other manufacturers of the day.

A businessman for 27 years by this time, Clancy knew that safety and comfortable working conditions were basic to employee productivity. "The first requisites necessary for a model factory are Light, Air, Safety and Comfort of the occupants," he wrote. "Our buildings have proved successful in furnishing all of these. They are



The 1941 catalog has photos of some of Clancy's installations including the Purdue University Music Hall and the Mohammed Temple in Peoria, Illinois. Not pictured are the Cleve Theatre in Columbus, Ohio, and civic auditoriums in Augusta, Georgia, Charleston, West Virginia, Houston, Texas, and Fort Worth, Texas.

fireproof, concrete structures set in a frame of lawn, trees and flowers on an ample plot of ground."

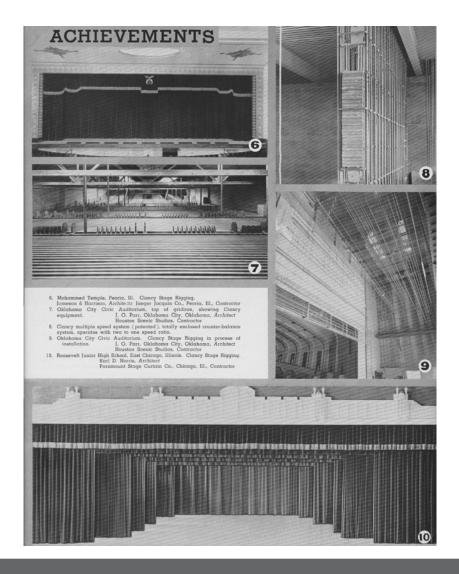
The new plant had a full assortment of modern machine tools, "so far ahead of old-fashioned machinery that those familiar with the ordinary machine shop are sometimes at a loss to understand the uses of these wonderful tools," Clancy went on. "There are huge turret lathes costing five times as much as an ordinary lathe and doing ten times the work; drilling machines which do several operations at the same time; huge presses which force heavy sheet-metal into the form of parts that would ordinarily be made out of heavier but weaker castings."

Sparing no expense, Clancy made sure that the factory also contained a lunchroom, recreation areas, and bathrooms using a larger proportion of the total floor space than in any other factory in New York State at the time. Café Trois Feuilles, the J. R. Clancy lunchroom, was lined with large, framed posters of fashion plates: full-length portraits of stylish women in beautiful clothes.

With the new factory, Clancy introduced a long list of new products: line extensions of stage screws, improved smoke grooves and vents for asbestos curtains, rigging for side draw curtains, easy-set head blocks, new steel loft blocks, and a mule block for side tabs.

Clancy also unveiled a game-changing innovation in this catalog: the counterweight system, or "the very wonderful Flowing Weight System designed and installed by Mr. Hagen in The New Theater."

The catalog described the details: "The counterweight carrying frame is guided by a single rail at the back, attached to the wall. The frame is provided with four equalizing spools,



which hold ends of haul cables and regulate length of same as required. A fifth equalizer takes up slack in hand haul rope. A new type pin rail clutch permits [the] system to be operated from stage or fly gallery. Every defect in former types has been eliminated and is designed to use in conjunction with our new twelve-inch center draft parallel lead blocks."

The new factory and the resulting innovations drove productivity at J. R. Clancy to unprecedented levels. In 1924, the company took counterweight rigging to the next step, introducing a system Clancy called Manual Counterbalance Rigging, "a method by which scenery could be easily raised and lowered with the least effort and in a way that would, in necessity, be rapid but always sure and free from the alternating stops and starts unavoidable in the old overhand manual hoist. "

Clancy essentially dismissed the hydraulic and electrical rigging solutions presented by other players in the rigging game. "Power which was under control only at starting and stopping points was found to be impractical, as, owing to the lightness of many drops, they easily swayed in a slight draft, resulting in frequent fouling and damage that at times marred the whole picture," he wrote in explanation. "Later tests were made of a combination of manual labor and counterweighting, all 'hanging stuff' being counterweighted to a nicety, so that one man can easily operate it either from the stage floor or gallery. In the operation the movement of the scenery is at all times in the hands of the driver. If a 'foul' is imminent, it is immediately detected and avoided. In practice a large number of scenes can be rapidly changed in a short time."

All of this being said, it's almost amusing that Clancy chose to offer another manufacturer's motorized rigging device in the 1924 catalog, just after insisting that such solutions were unworkable. The New Curtain Operating Device, made by J. H. Welsh in New York City, is "entirely

automatic in action, it being necessary only to throw a switch to open the curtain when closed or close it when opened. The curtain slides upon a track and the switches by which the device is governed may be placed in the projection room or in any other portion of the theater desired. The mechanism is simply, sturdy and compact."

Clancy waited until 1925 to offer all of the components of his manual counterbalance system in the catalog, allowing customers to choose from a veritable a la carte menu of hardware. Side wall slides, the first steel guides for counterweight arbors, new Welch Model blocks, the counterbalance ball-bearing single block, carriages for wire guides, slip counterweights to fit these new carriages, and clamps and rings for steel pipe battens all were revealed in this catalog.

Counterweight rigging quickly became the system of choice for theatres of every size throughout the United States and beyond. By John Clancy's death on April 21, 1932, J. R. Clancy, Inc., had cemented its leadership position in the stage rigging industry for the long term.

1941: "A Complete Service for the American Stage"

In the interim between the catalogs of the mid-1920s and the significantly revised catalog of 1941, John Clancy's successors clearly realized that there was money to be made in custom work.

The 1941 catalog's opening letter detailed the company's new approach: "The advent of the Civic Auditorium, the Community Convention Hall, and great Music Halls, has brought a new opportunity and a new challenge to Clancy engineers. The planning of this type of stage called for new talents, new skill born in the experience of the theatre but expanded to meet the challenge of the greater need. The machinery for the safe handling of gigantic curtains; the building of immense asbestos curtains on frames of steel to provide fire safety; great orchestra lifts to bring symphony orchestra from the pit to orchestra level and on to stage level; the creation of new treatments for the proscenium, new apparatus to bring 'Theatre' to the larger arena of the auditorium stage—all of these and many other problems peculiar to an old art reborn are a part of the everyday work of J. R. Clancy, Inc."

Following this letter were five pages of photos, illustrations of J.R. Clancy's rigging installations across the country and as far away as the Philippines. The company's commitment to motorized rigging became apparent through several

How Motorized Rigging Works



Yesterday's simple wood-frame and painted fabric flass have been replaced by heavy, multiple-element sets that must be flown with speed and accuracy in complex sequences. The muscle of motorized rigging and the precision and repeatability granted by computer-based electronic controls have made it possible.

Quality Components

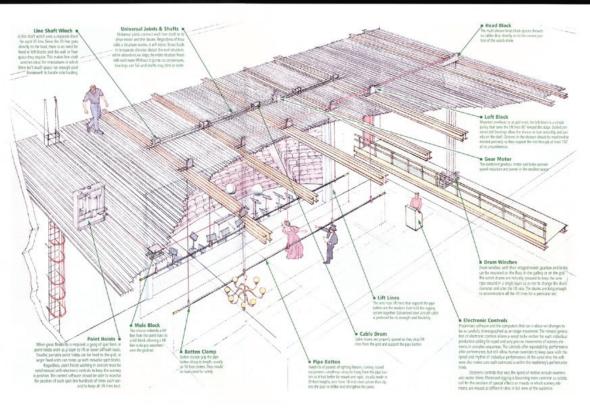
Motorized rigging also is useful to raise and lower loads that aren't easily counterbalanced, like speaker clusters, scoreboards or chandeliers. Regardless of the load, however, motorized rigging is still only as good as its components.

as its components.

Motors, gearboxes and brakes that have been integrated into a single unit require less space and eliminate exterior couplings. The best high speed winch drums are laser aligned to within a few thousandths of an inch. Self-aligning flanged bearings offer reliability and a minimum of noise-causing wibration. Look for gearboxes with double shaft seals. Brakes should be ratted for at least 200 percent of the motor's capacity so when will stop and hold the rated load.

Quality Software

The integrity of the software that controls the motorized rigging is just as important as the hardware life. Software must meet the performance needs of live theatre. It is easy to use and, of course, can handle complex flying sequences with several winches running at different speeds to different positions while monitoring all the required safety interlocks. And it allows overrides when shows run a little differently each night.



pages of Clancy Contour Curtains, motorized systems that allowed the house curtain to open and close based on a predetermined set of targets.

Next, the catalog presented stage machinery: motorized elevator lifts and curtain controls. By 1942, the catalog included a flying picture screen frame, cradle and track for sound horns, and a wagon to move the band on and off stage.

Automation sweeps the nation

The age of stage rigging automation had arrived, keeping pace side by side with counterweight rigging, the more affordable option for everything from school auditoriums to large performing arts centers. In the 1950s and 1960s, J. R. Clancy dominated the automation age with custom solutions as well as off-the-shelf products: disappearing microphones, Versatel curtain controls, motorized winches, revolving turntables, and a motorized band car.

The company's list of impressive achievements grew as the industry embraced new technologies. J. R. Clancy's 1960 catalog featured

a partial list of recently completed jobs: auditoriums, network television studios, war memorials, college theatres, and high schools. Other rigging contractors brought in J. R. Clancy consultants and designers to assist with their projects, adding well-known names including Texas Scenic, I. Weiss, A. J. Hoffend & Sons, and Northwest Studios to the company's client list.

Perhaps most important to our exploration of rigging history is the first evidence of automated winch controllers: "from pushbuttons stations or portable type controls, to the most sophisticated memory-programming systems..." In 1960, J. R. Clancy introduced SceneControl, the first automated rigging system the industry had ever seen. Remarkably similar to the automated systems of today, SceneControl "helps the architect eliminate much presently wasted fly and wing space...cuts structural steel requirements drastically...eliminates the danger and waste of backstage clutter...and removes the pin rail and fly gallery from the architect's lexicon." SceneControl moved beyond the counterweight system, shifting the load from the traditional grid to the high steel of the roof construction. The motorized hoists were controlled from a central console, which looked much like the lighting dimmer boards of the same era.

Here on the new frontier of rigging automation, J. R. Clancy engineers explored the applications for computer-controlled systems — like those used for elevators or industrial manufacturing — and their impact on the future of moving scenery.

By 1971, the J. R. Clancy catalog underwent a significant modernization. Dimensional drawings appeared right in the catalog, and the text and illustrations throughout the book offered education and instruction as well as product descriptions. An entire page was devoted to the discussion of wire guides versus T-bar track for arbors, while another page explained the differences between underhung and upright rigging. One of the most significant innovations was the spot-line rigging system, which used powerdriven counterweighted line sets, combining the effectiveness of two proven technologies. (Today, J. R. Clancy's PowerAssist

automation drive for counterweight linesets offers a similar blend of technologies.)

Nearly thirty years would pass before J. R. Clancy offered another catalog, but the industry did not sleep in the interim. A virtual revolution took place in the world of theatre rigging as automation replaced counterweights in the most sophisticated theatres. J. R. Clancy led the way with automated hoists and its Shamrock controller-introduced in the 1980s and still in use in theatres across the country—but bringing the convenience and versatility of automation to smaller theatres, high schools, and community venues still daunted inventors.

The company led the rigging revolution by taking on custom projects that required innovative solutions, some of which would evolve to become the off-the-shelf products of the twenty-first century. As reflected in the scope of its late twentieth-century catalogs, J. R. Clancy's versatility allowed the company to manufacture anything from belaying pins to complete stage equipment systems for the world's top opera houses, concert halls, and performing arts centers. At the same time, the rigging company served smaller theatres and auditoriums as well, manufacturing rigging that was appropriate and safe for middle and high schools. Some of the company's most important inventions in counterweight rigging safety came out of this era: rope with woven-in wear markers, safety-conscious rope locks, and J-guide to replace the less effective T-bar arbor guides.

J. R. Clancy was ready to enter the off-the-shelf automation market in 2004, introducing its PowerLift line of motorized hoists and the updated SceneControl automation systems. These products use technology created for the world's major performing arts centers and concert halls, based on the knowledge gained from automated rigging innovations that began as far back as 1960.

Just as John Clancy knew that safe working conditions were critical for his employees, J. R. Clancy recognized that stagehands and others who operate stage equipment must know how to use the rigging safely. In 2003, J. R. Clancy helped the Entertainment and Stage Technology Association (ESTA) launch a rigging certification program to train and test rigging professionals. Those who pass the exam become Entertainment Technology Certified Professional (ETCP) riggers, a highly regarded achievement in theatres across the country.

Today the J. R. Clancy catalog has moved to the company's website at www.jrclancy.com, but the spirit of those first letters John Clancy wrote to his customers remains central to the company's operating philosophy: J. R. Clancy's stated mission is simple: "Make Our Partners Successful" (MOPS). To accomplish this, the company uses the exemplary manufacturing and project management principles set forth by the International Standards Institute (ISO). J. R. Clancy has been a registered ISO 9001 company since 2003, most recently achieving the ISO 9001:2008 certification.

Making a formal declaration of its commitment to its MOPS mission, J. R. Clancy offers its customers an Extraordinary Guarantee. "If you feel we've not met this commitment in any way and have caused you to spend additional time or money, we'll make it right at our expense," the guarantee states. "We'll send you a replacement, allow you to return it for full credit, or reimburse your direct out-of-pocket expense for correcting the problem."

High standards never go out of style, especially after 125 years of customer satisfaction and technological achievement.

Tom Young is the Vice President of Marketing at J. R. Clancy. He's been developing lighting and rigging systems worldwide for many years, and has been a USITT Director at Large, USITT Finance Committee, and an ESTA Vice President. Randi Minetor is an author with eighteen books currently in print, on topics including American bistory, the U.S. national parks, and outdoor recreation.