



# **T H E A T R E L I G H T I N G**

**Through the Ages**

**PART ONE**

**CIBSE HERITAGE GROUP**





Red Bull Theatre, London with candle footlights and chandeliers on stage  
The Wits, or Sport on Sport, 1672 (Theatre Lighting Before Electricity)

Front cover: Theatre Royal Haymarket, Drury Lane, London (Grade I listed)  
This the 4th theatre dates from 1812 (Theatres of London)





*Criterion Theatre, Piccadilly Circus London, dates from 1874 (London Theatres)*

# **T H E A T R E L I G H T I N G**

## **Through the Ages**

### **PART ONE**

**Eur Ing BRIAN ROBERTS CEng Hon.FCIBSE  
Life Member ASHRAE**

# CONTENTS

## PART ONE

- 1.1 Candle & Oil Lighting
- 1.2 Lime Lighting
- 1.3 Gas Lighting
- 1.4 Electric Lighting

See also

## FEATURED THEATRES

*In alphabetical order by name*

## PART TWO A-G

## PART THREE H-P

## PART FOUR Q-Z



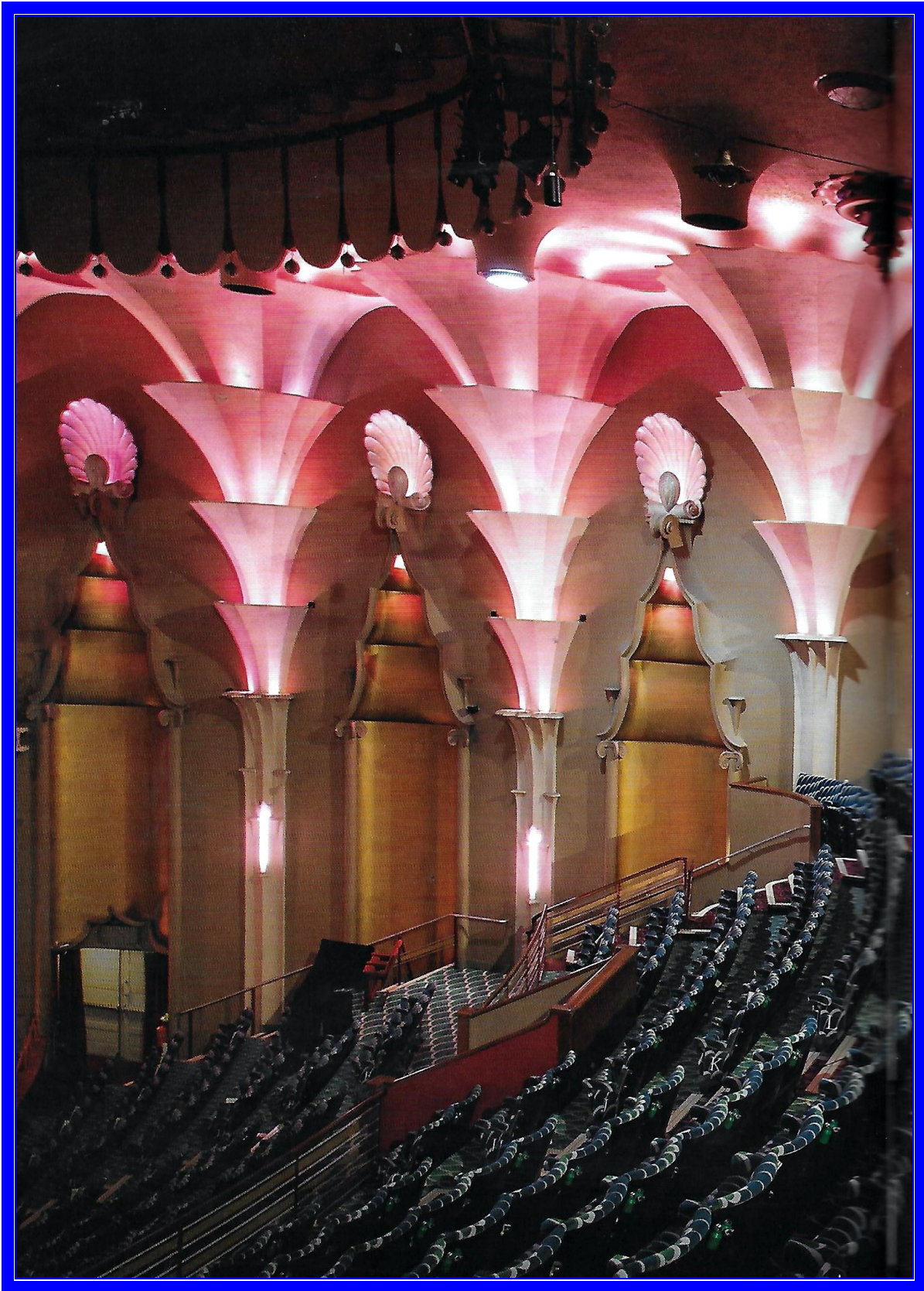
*The torch, as used on the Elizabethan stage (Kyd's *The Spanish Tragedy*)  
A scene from the *Duchess of Malfi**





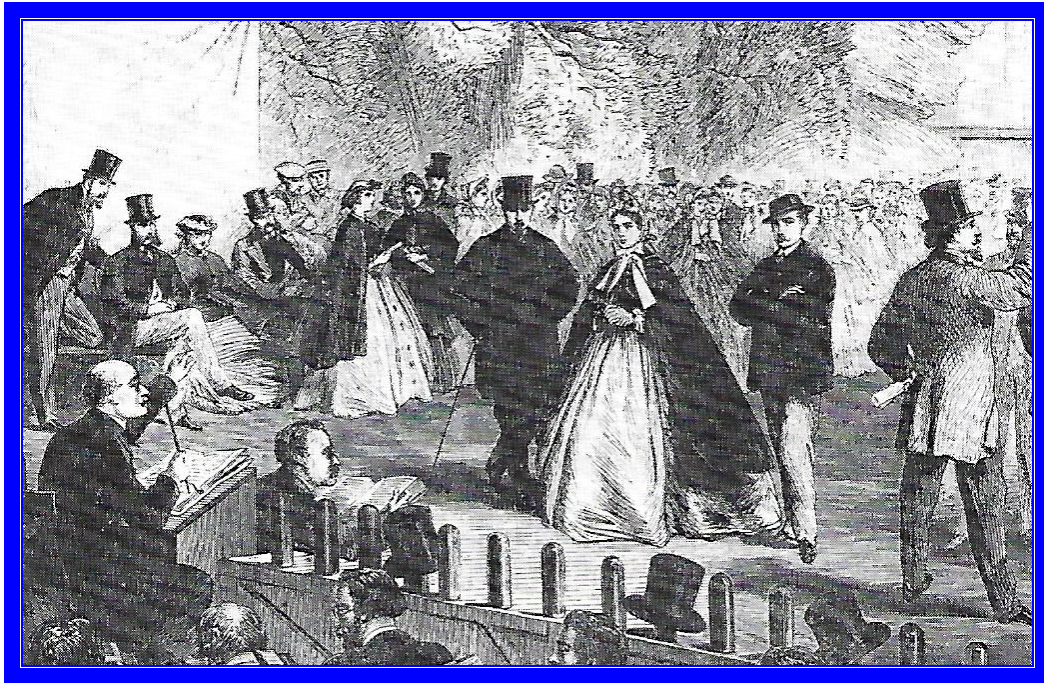
*Medieval entertainment by torch and candlelight, 15th century (Princely Feasts and Festivals)*





*Apollo Victoria Theatre London, built as cinema 1930 (London's Great Theatres)*





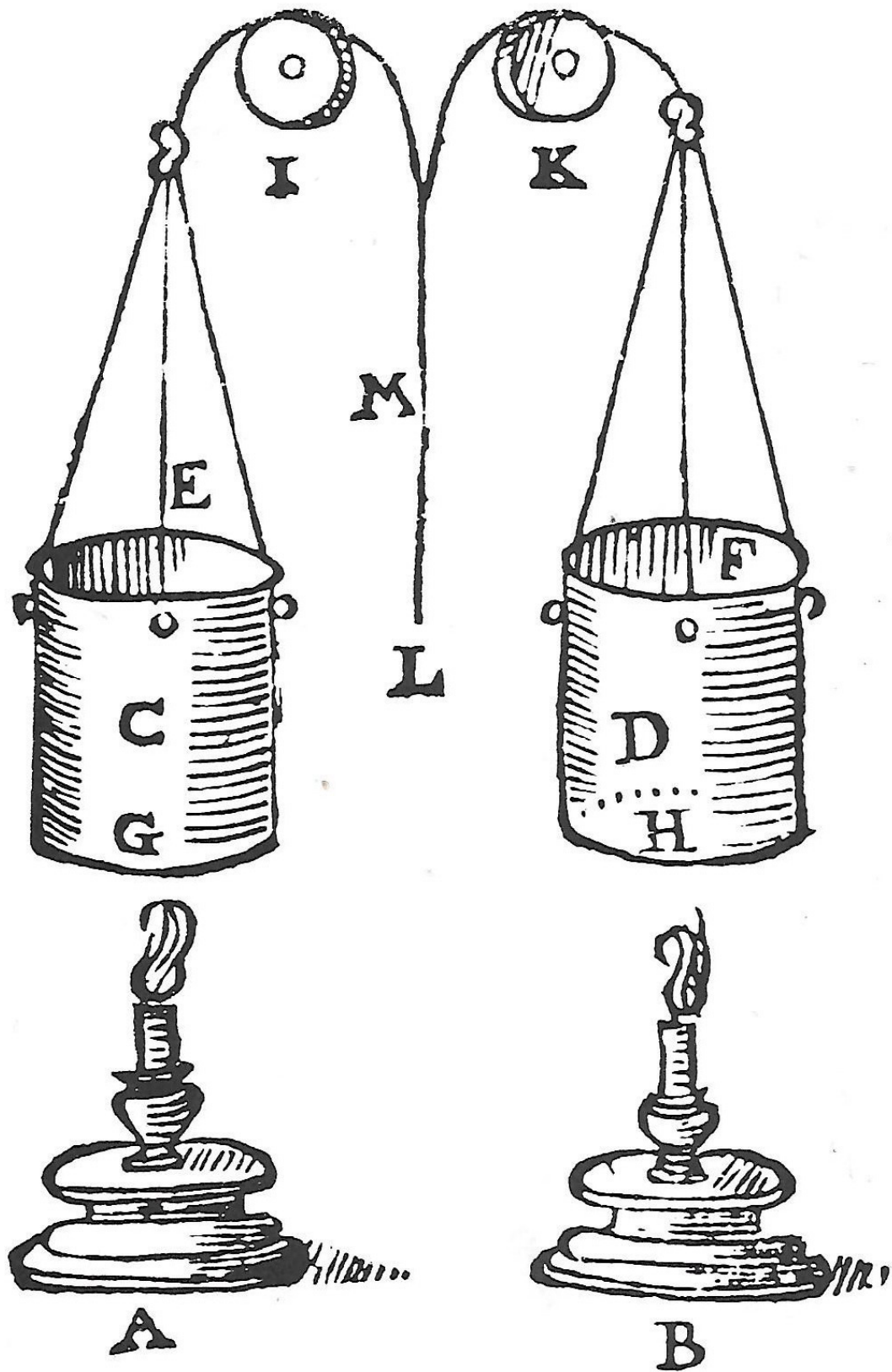
*Gas Float at Her Majesty's Theatre, 2nd Theatre 1863 (Theatre Lighting in the Age of Gas)*

# **T H E A T R E L I G H T I N G**

**Through the Ages**

**PART ONE**

**CIBSE HERITAGE GROUP**



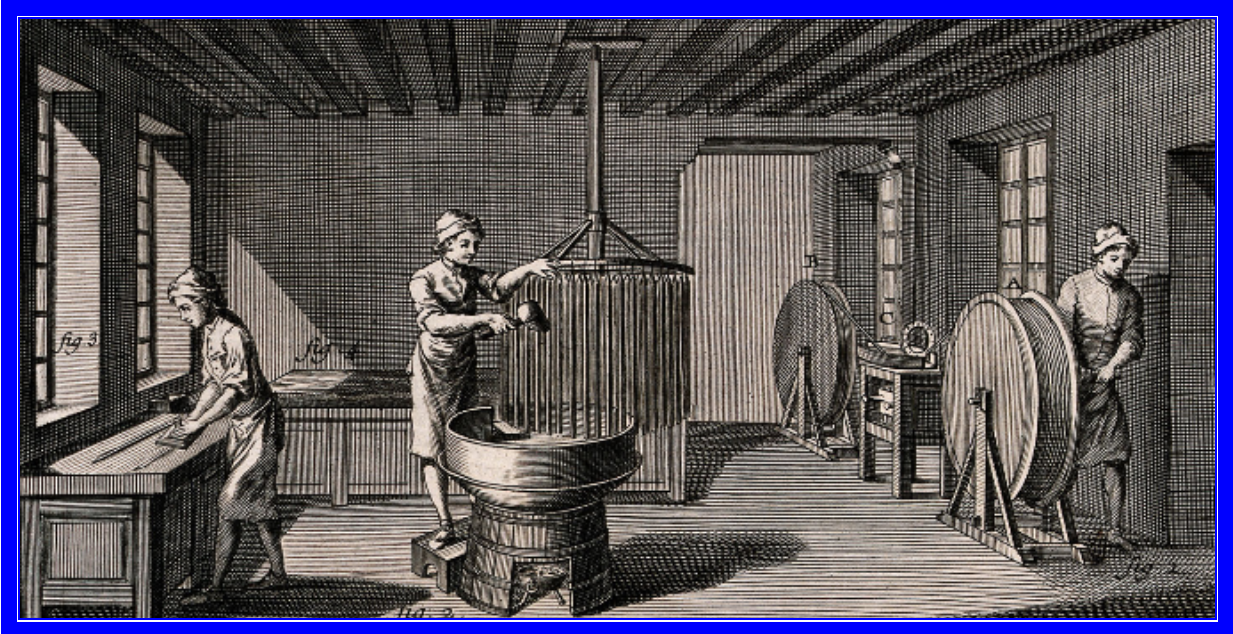
Nicola Sabbatini's candle dimming mechanism, Italy 1638 (Theatre Lighting Before Electricity)



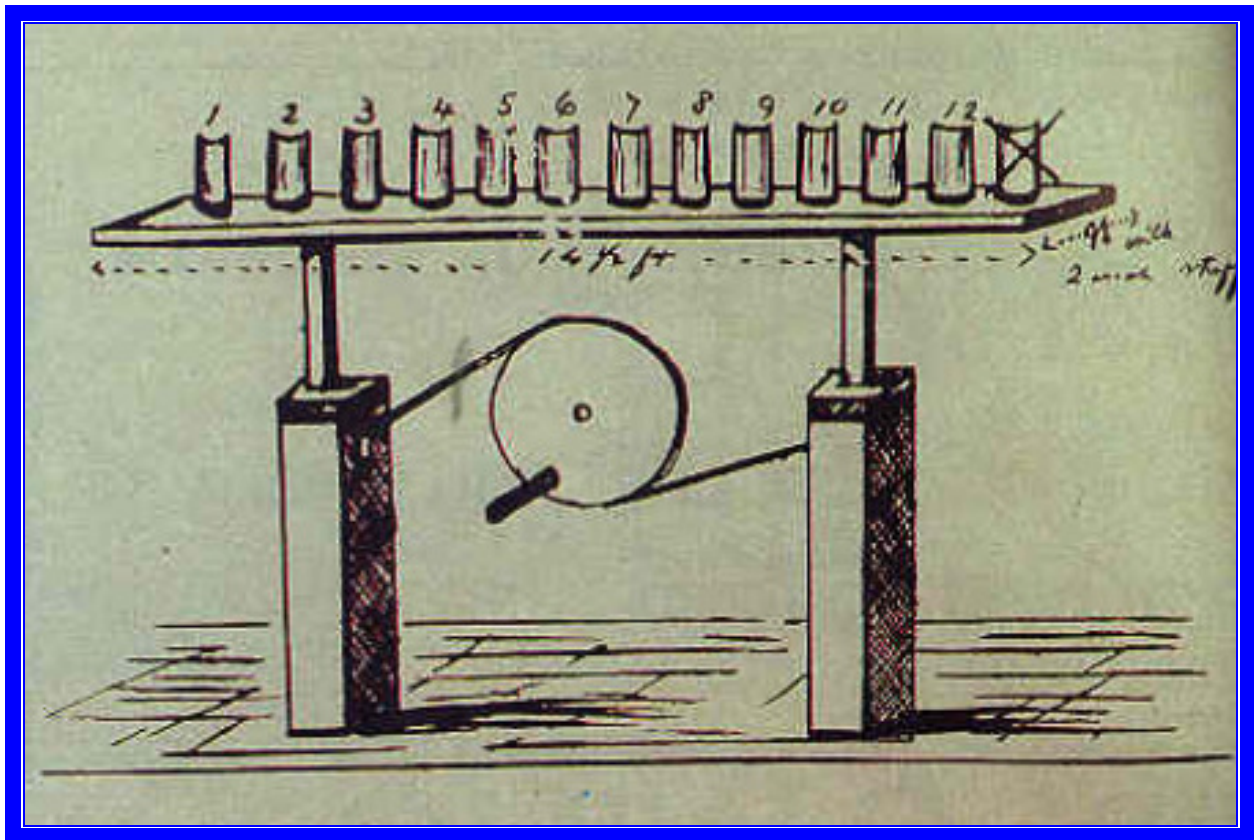


*Candle snuffer extinguishing the footlights during the interval, 1800 (Theatre and Playhouse)*

# 1.1 **CANDLE & OIL LIGHTING in the Theatre**

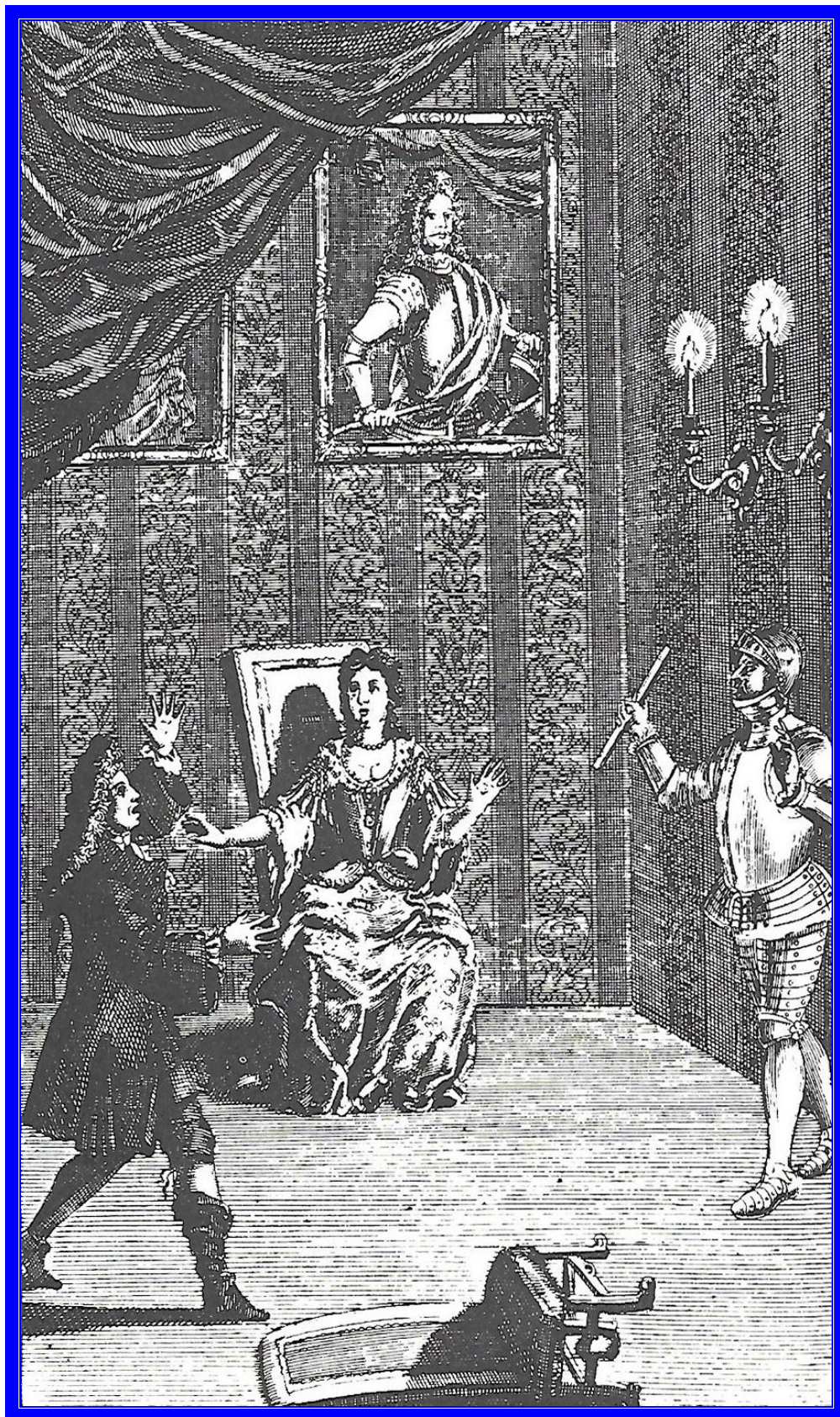


*Candlemaker's Workshop, about 1700 (Diderot's Encyclopédie)*



*Movable footlights, 1815 (Theatre and Playhouse)*



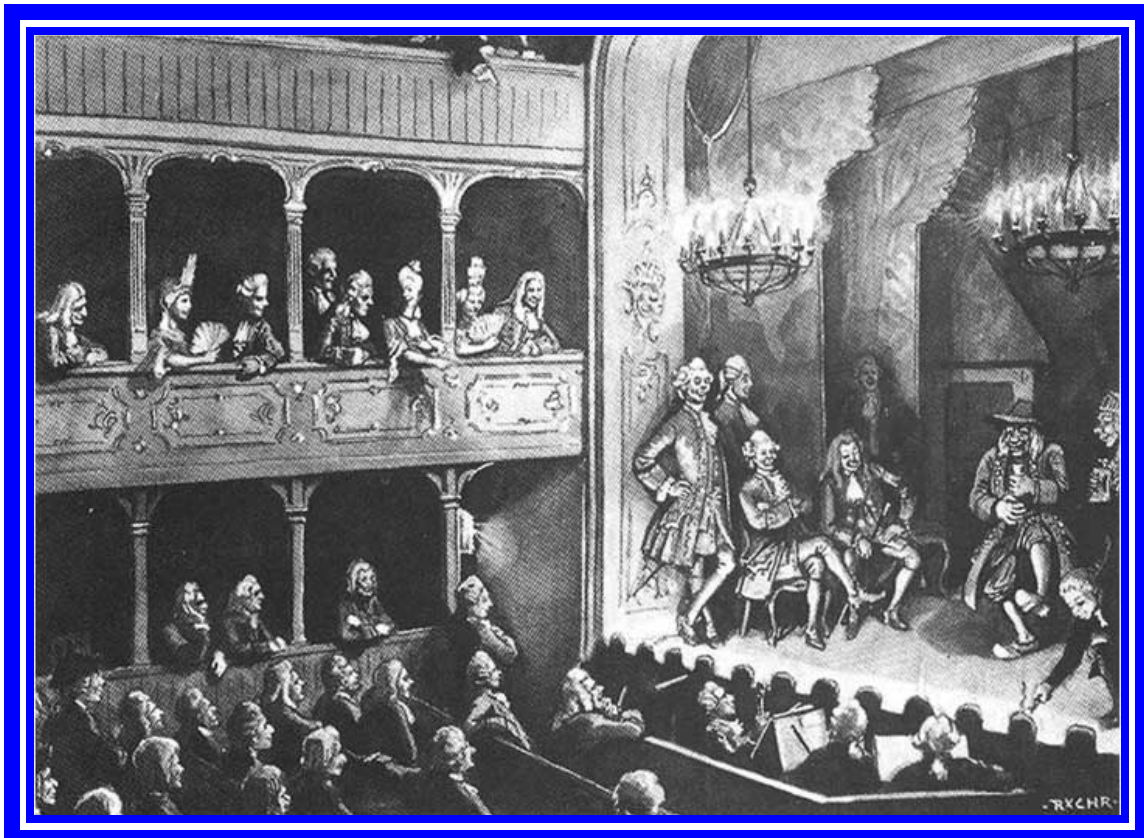


*Hamlet with on stage wall sconce, 1709 (Theatre Lighting Before Electricity)*



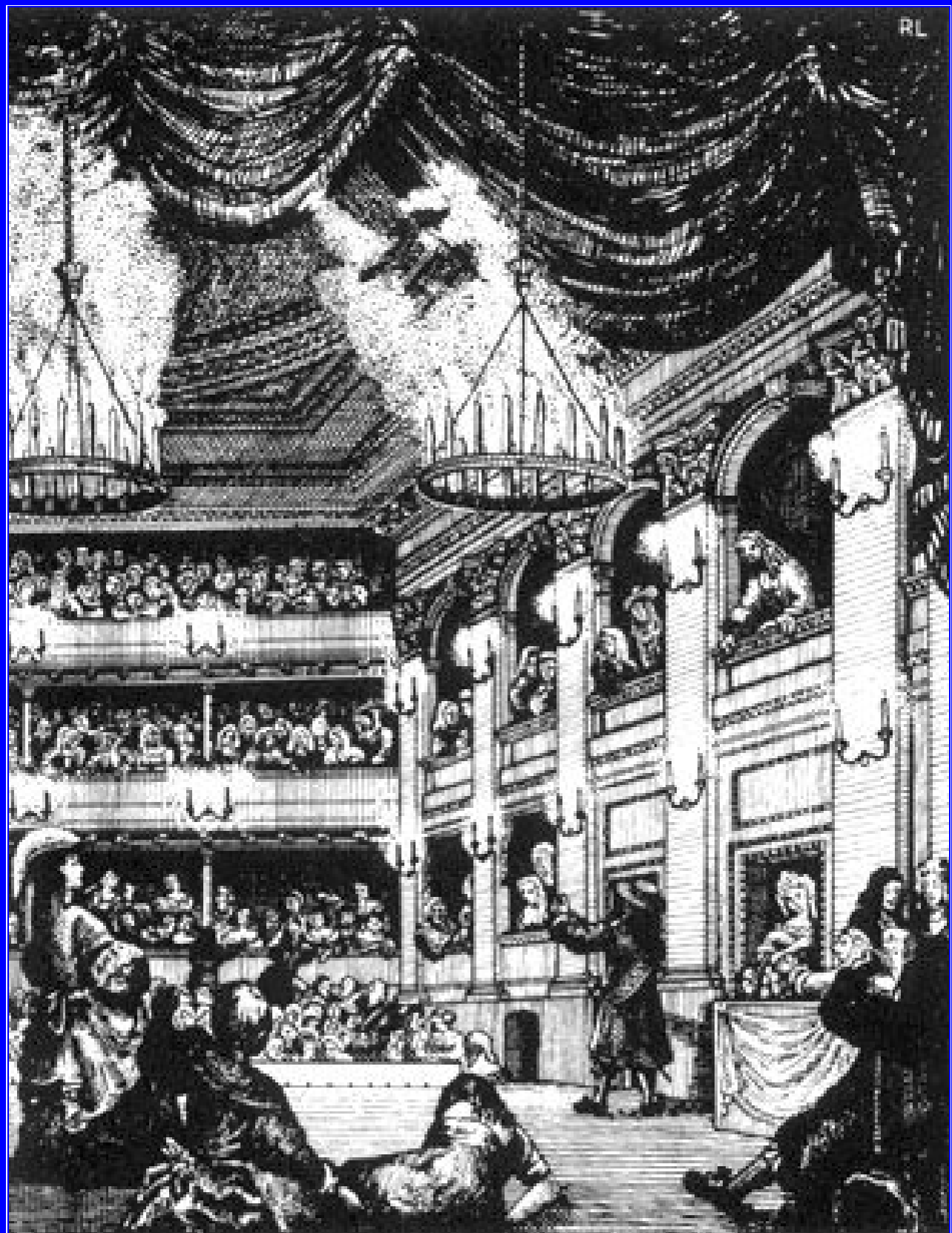


*The Comedie Francaise in a Moliere Farce with overhead chandeliers, 1670  
(All The World's A Stage)*

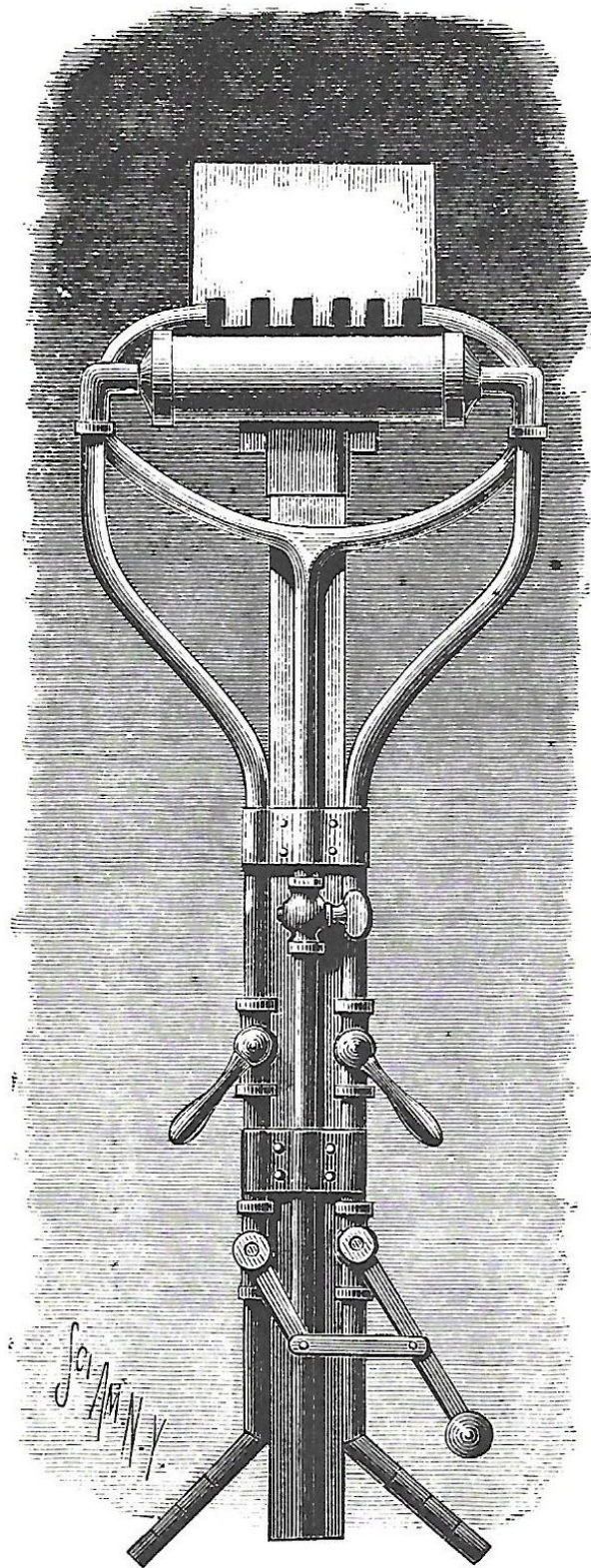


*Candlelight performance (University of Bristol)*



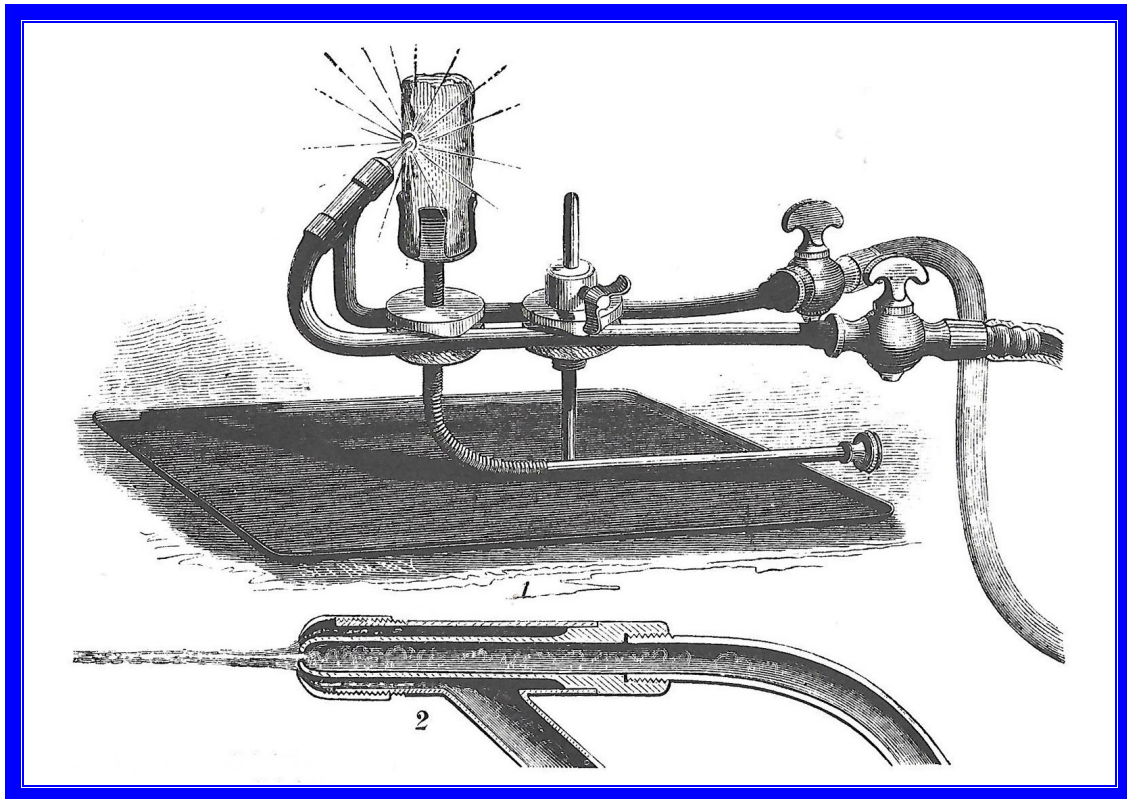


*Drury Lane Theatre in London, 17th century (The Development of the English Playhouse)*



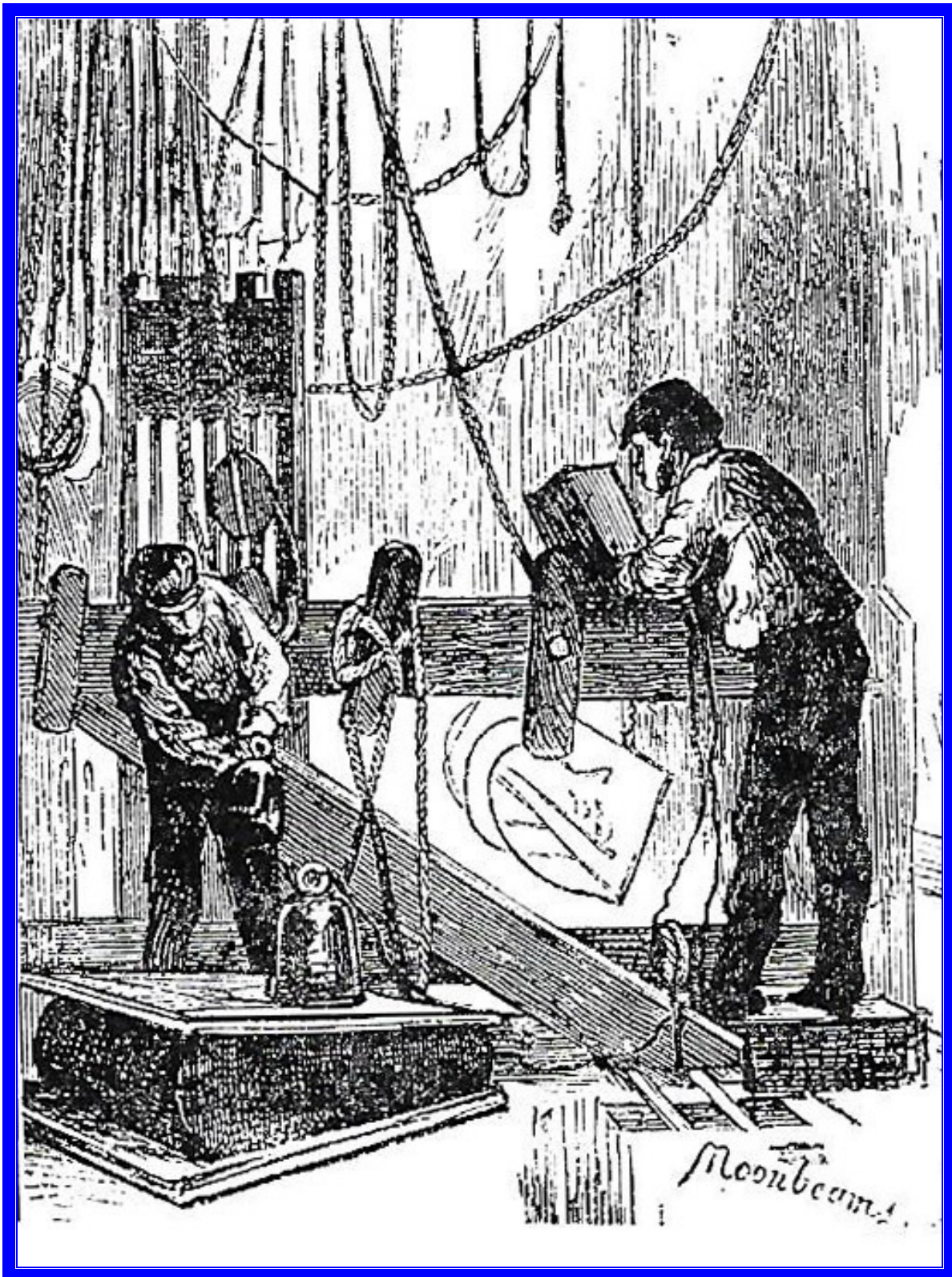
*Improved lime-light burner (Theatre Lighting Before Electricity)*





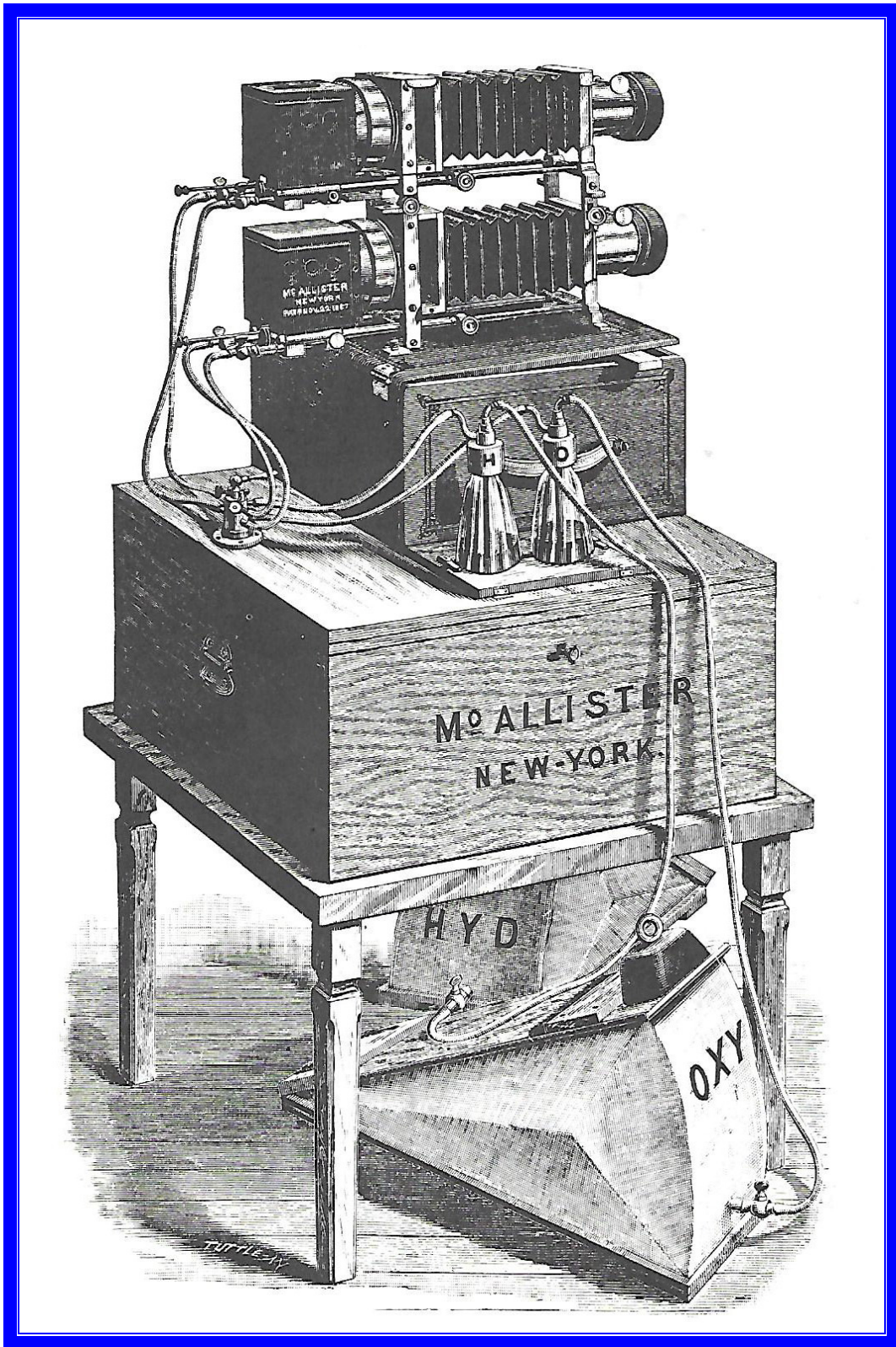
*Improved limelight burner ((Theatre Lighting Before Electricity)*

## 1.2 LIME-LIGHTING in the Theatre



*Limelight men operating in the fly-gallery (The Graphic, 1874)*





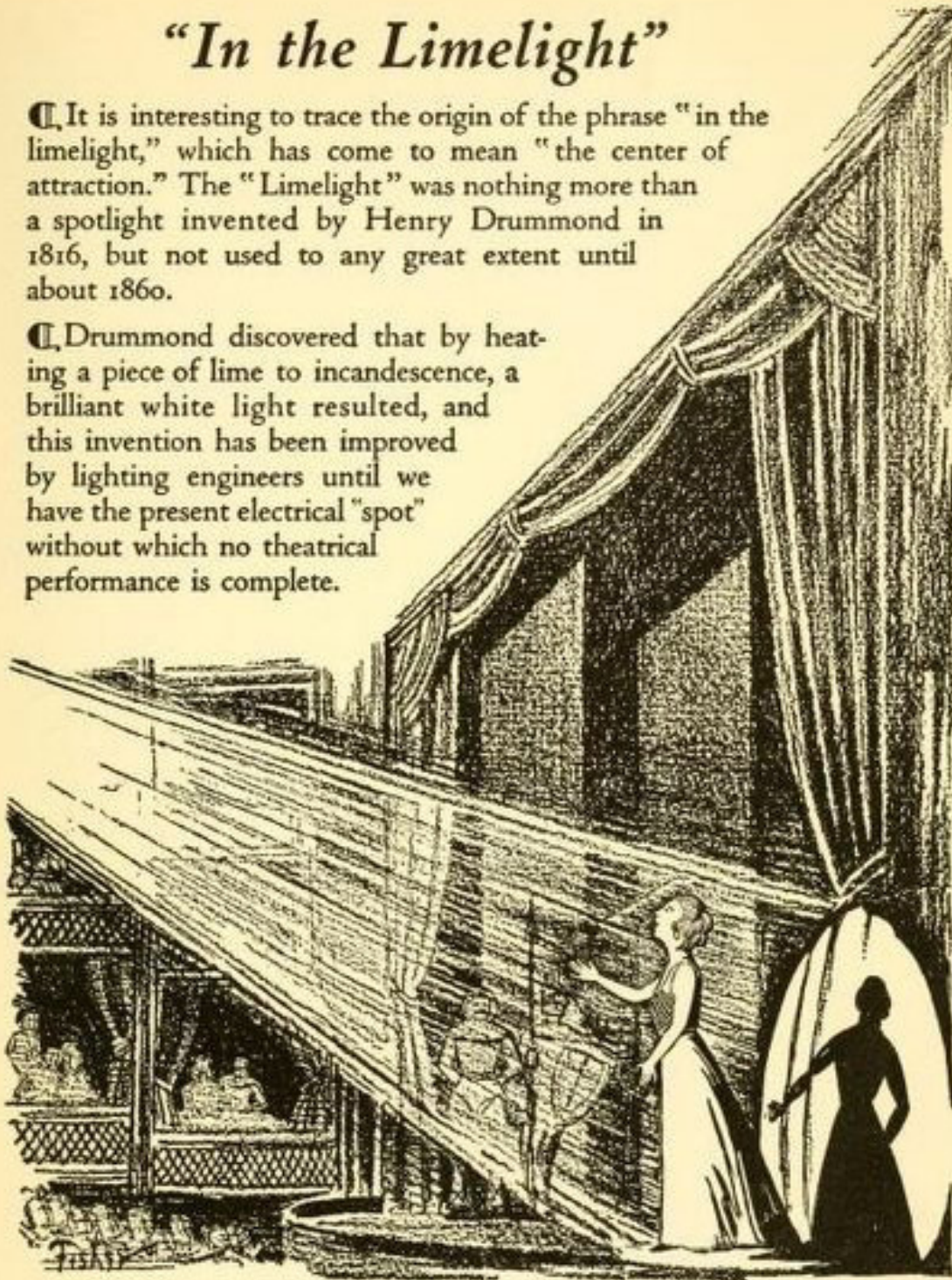
*Limelight stereopticon with oxygen and hydrogen bag feed apparatus  
(Electric Lighting Before Electricity)*



## *“In the Limelight”*

It is interesting to trace the origin of the phrase “in the limelight,” which has come to mean “the center of attraction.” The “Limelight” was nothing more than a spotlight invented by Henry Drummond in 1816, but not used to any great extent until about 1860.

Drummond discovered that by heating a piece of lime to incandescence, a brilliant white light resulted, and this invention has been improved by lighting engineers until we have the present electrical “spot” without which no theatrical performance is complete.







*The limelight was created by Thomas Drummond, 1816  
(Drummond Light, Limelight: a Device of its Time)*



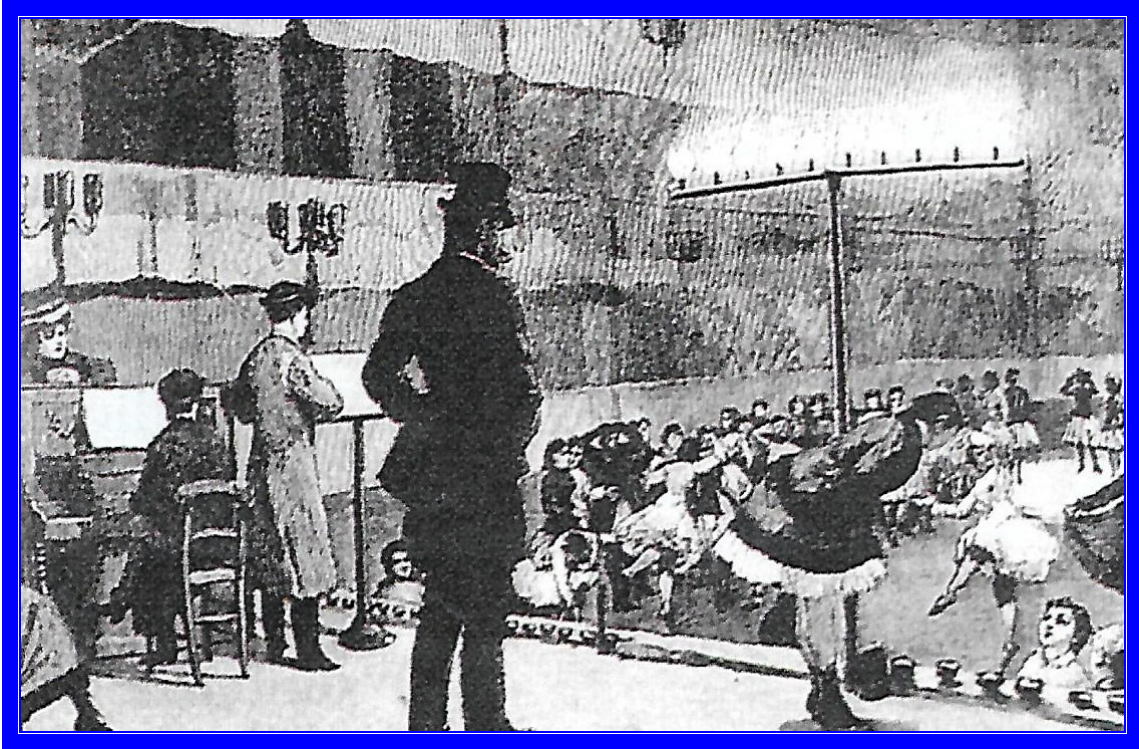
*A limelight spotlight from London, 1860*





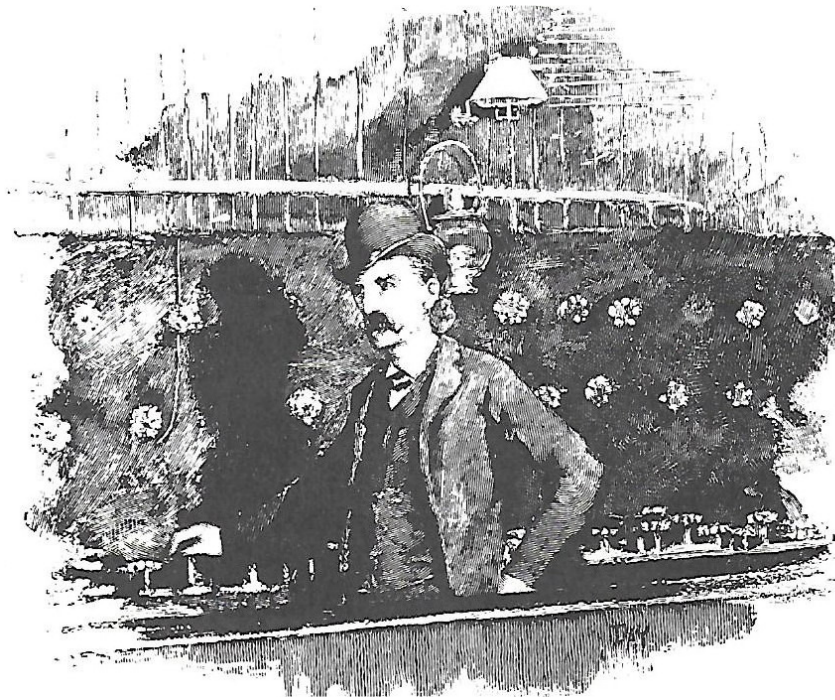
*Theatre gas bunch light (Theatre Lighting Before Electricity)*



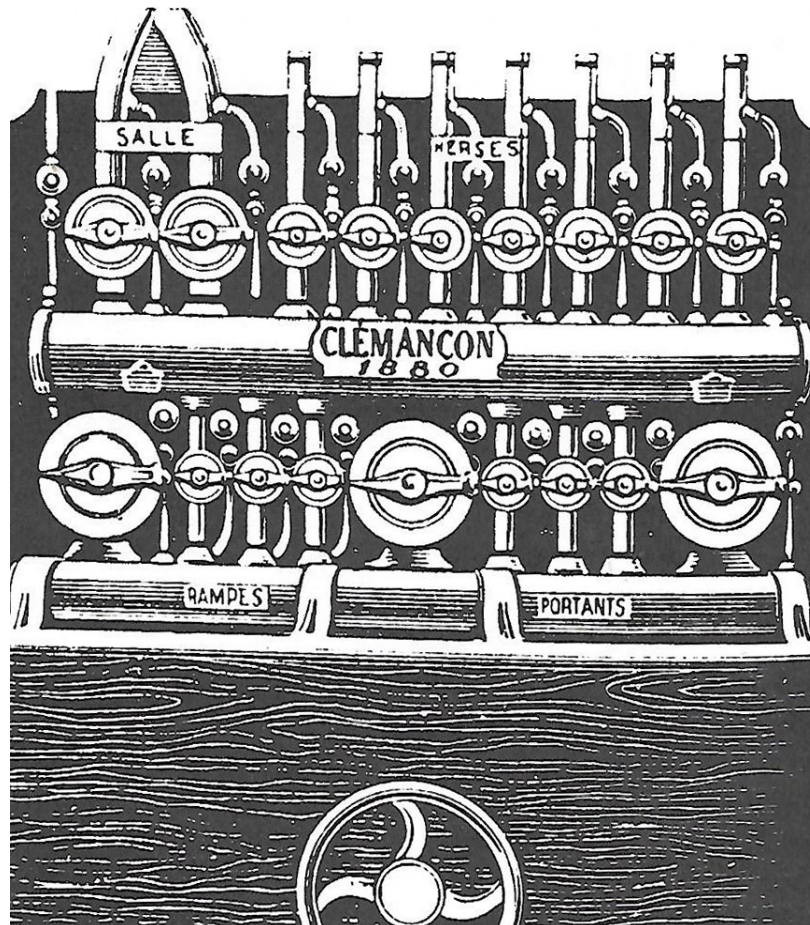


*"The Rehearsal" with a temporary gas batten on stage, c.1900 (Mander-Mitchenson Collection)*

## 1.3 **GAS LIGHTING in the Theatre**

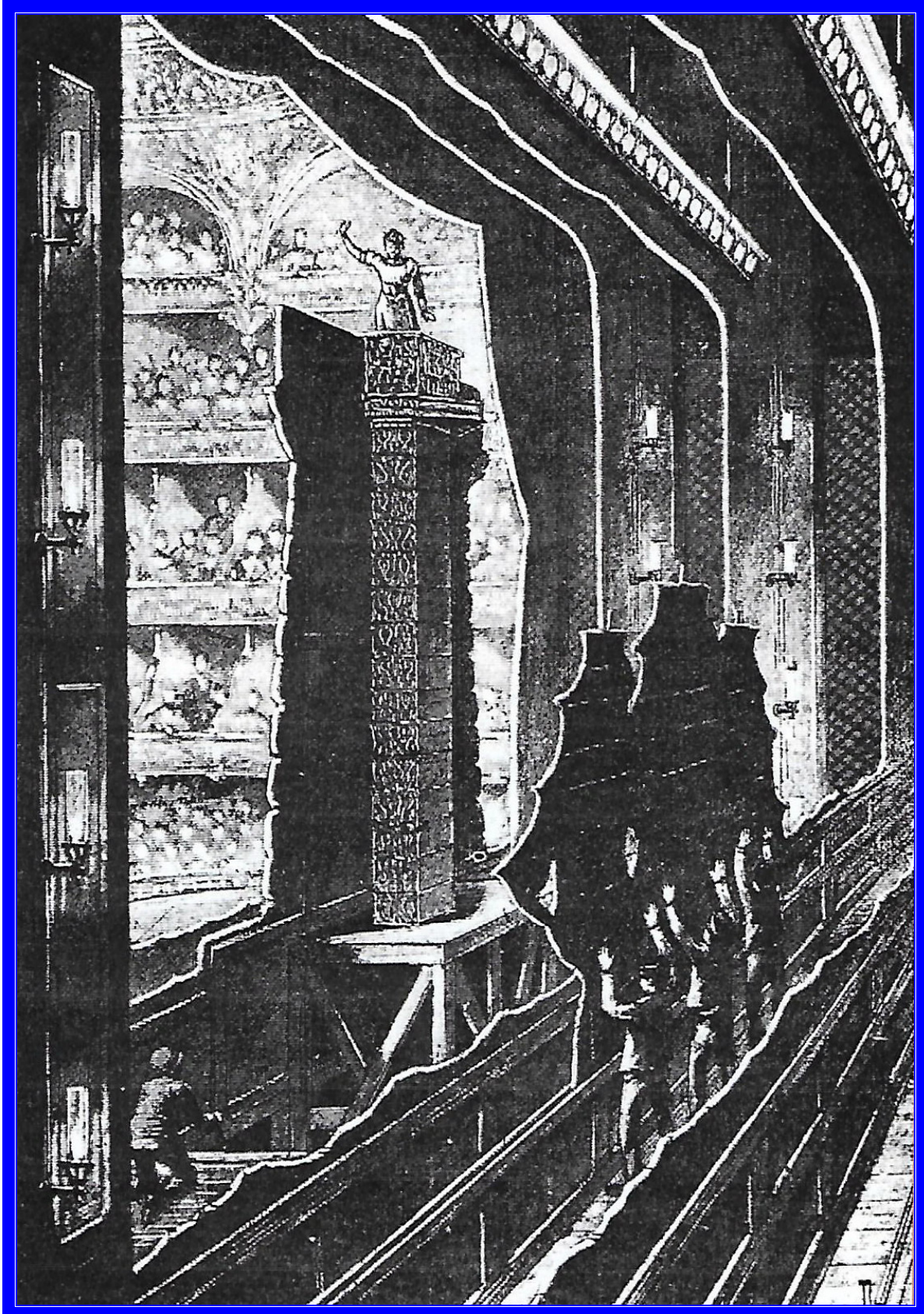


*Gas table at the Metropolitan Opera, New York 1888  
(Theatre Lighting Before Electricity)*



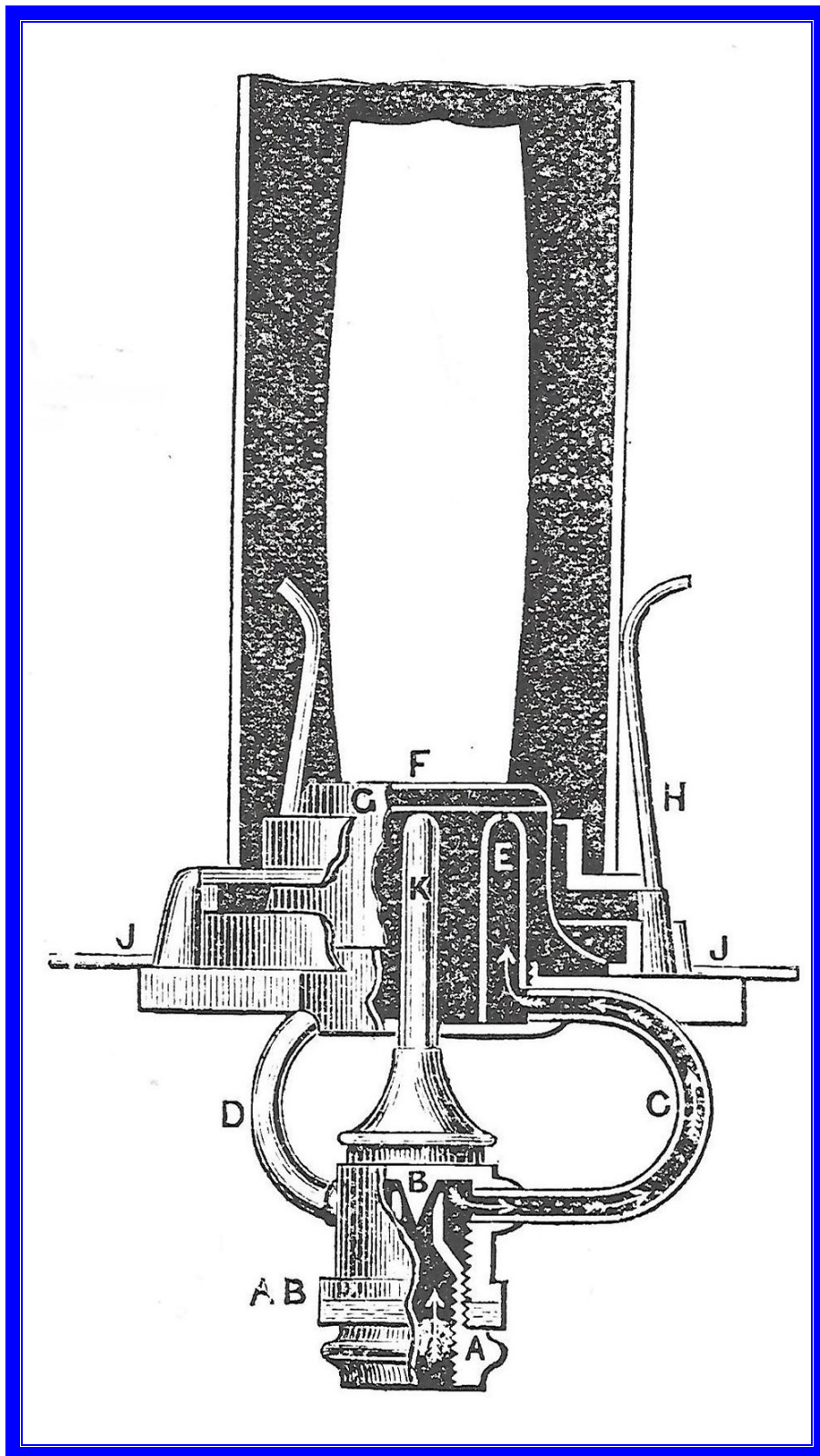
*Clemancon gas table, France 1880 (Theatre Lighting Before Electricity)*





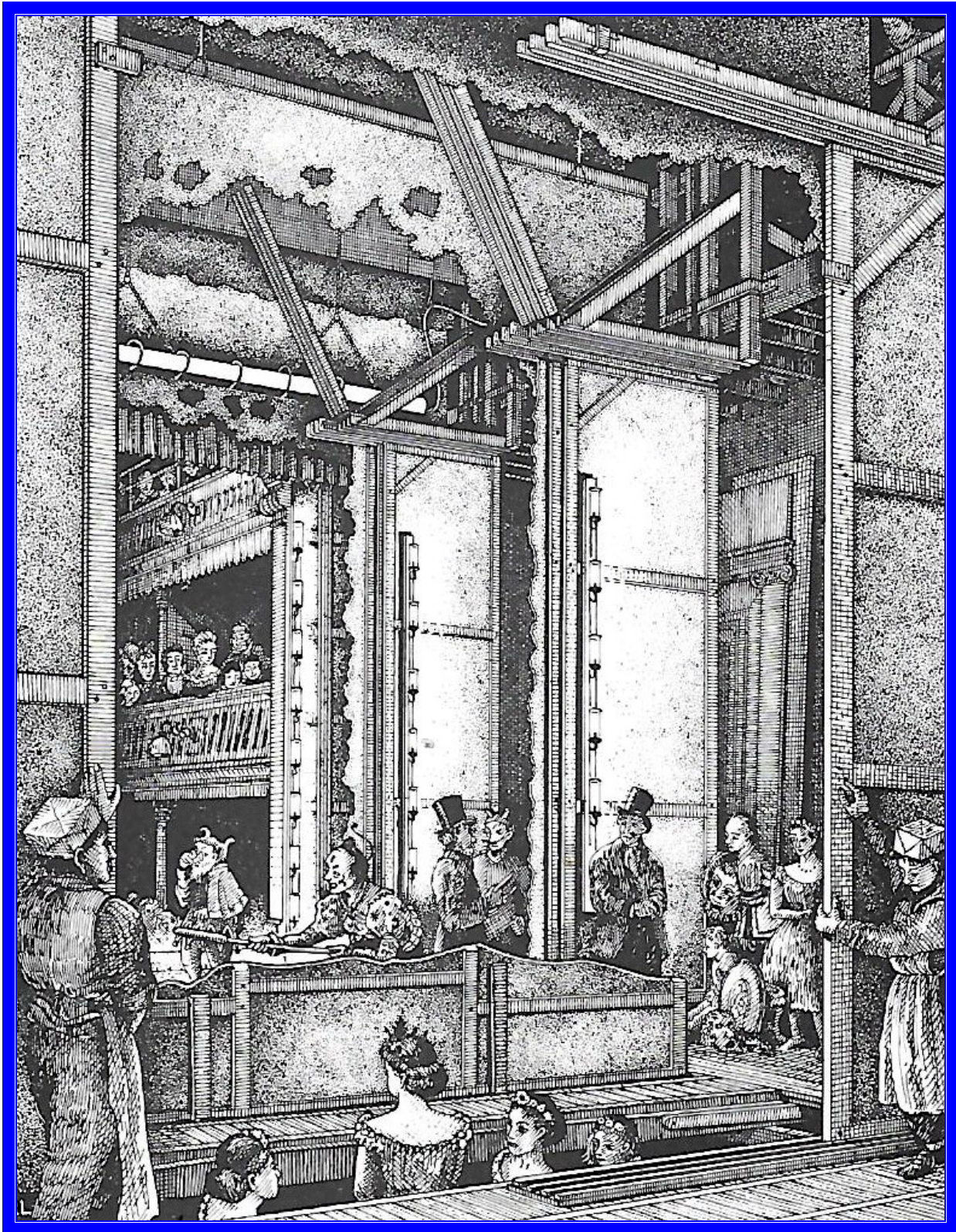
*Offstage left, view of a gaslit stage, (Theatre Lighting before Electricity)*





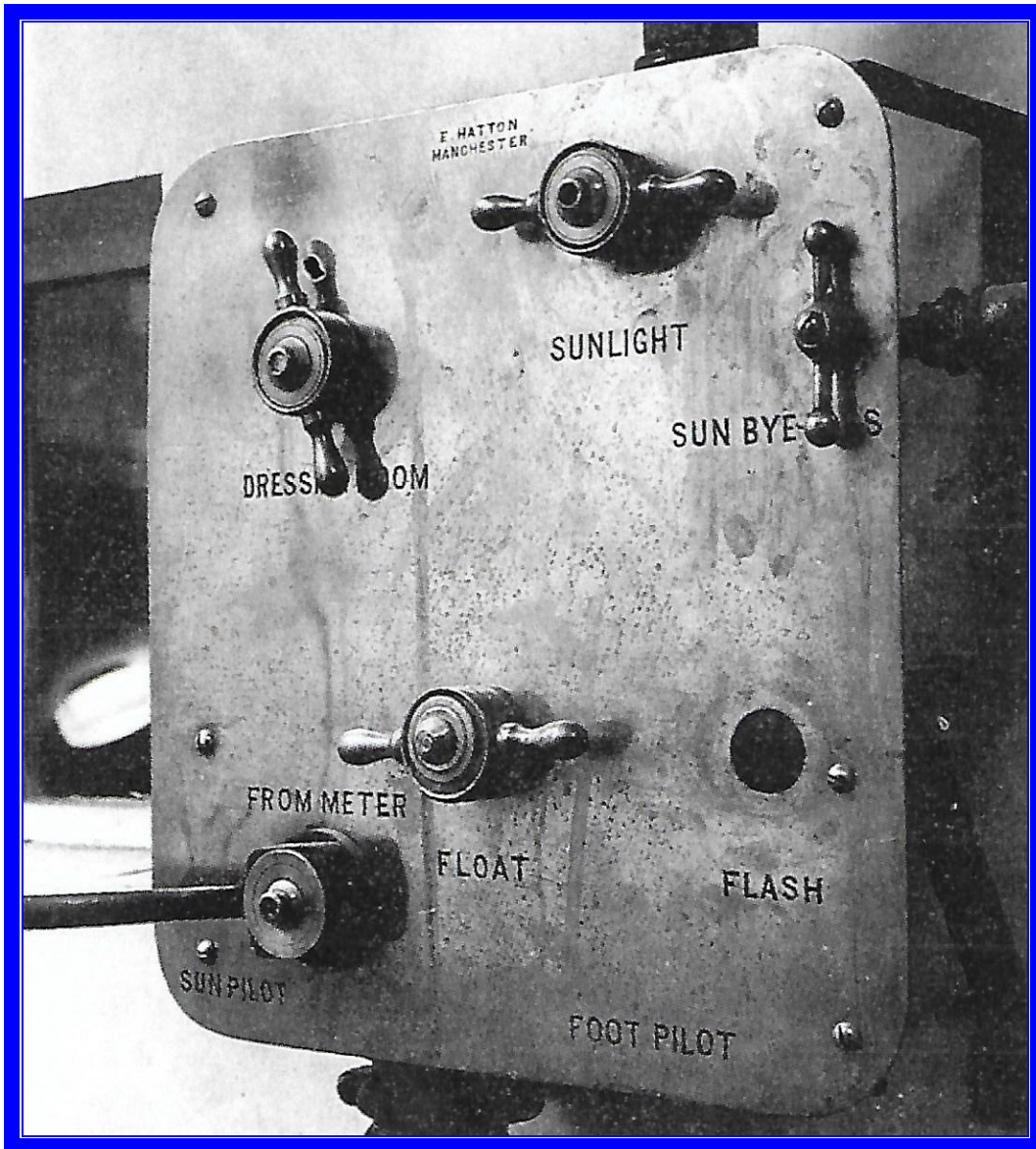
*Gas Argand burner (Theatre Lighting Before Electricity)*





*Gas lighting backstage at The Theatre Royal, Leicester 1836  
(The Development of the English Playhouse)*





*The gas distributor at Buxton Opera House, 1902 (High Peak Theatre Trust)  
It was also provided with a stage and auditorium electricity lighting system*

*The controls are labelled: From Meter, Sun Pilot, Foot Pilot, Float (footlights),  
Flash, Sunlight (sunburner), Sun Bye-Pass and Dressing Room  
with Manufacturer's Mark: E Hatton Manchester*

*The Float was on the most sophisticated triple system: Pilot, Flash and main supply.  
The Pilot lit the Flash, the Flash the whole of the Footlights.....  
This three-tier system provided safe and gentle ignition that was nor possible with  
the inevitably explosive leap from single Pilot to full length Footlights.*



# REGULATIONS

FOR THE BETTER

## Protection against Accidents by Fire at Theatres,

*Licensed by the Lord Chamberlain.*

### I.

All fixed and ordinary GAS BURNERS to be furnished with efficient Guards. Moveable and occasional Lights to be, when possible, protected in the same manner, or put under charge of persons responsible for lighting, watching, and extinguishing them.

### II.

The FLOATS to be protected by a Wire Guard. The first Ground-Line to be always without Gas, and unconnected with Gas, whether at the Wings or elsewhere. Sufficient space to be left between each Ground-Line, so as to lessen risk from accident to all persons standing or moving among such lines.

### III.

The rows or lines of GAS BURNERS at Wings to commence Four Feet at least from the level of the Stage.

### IV.

WET BLANKETS or RUGS, with BUCKETS or WATER-POTS to be always kept in the Wings; and attention to be directed to them by PLACARDS legibly printed or painted, and fixed immediately above them. As in Rule I., some person to be responsible for keeping the Blankets, Buckets, &c., ready for immediate use.

### V.

These REGULATIONS to be always posted in some conspicuous place, so that all persons belonging to the Theatre may be acquainted with their contents; every Breach or Neglect of them, or any act of carelessness as regards Fire, to be punished by Fines or Dismissal by the Managers.

**SYDNEY,**

Lord Chamberlain.

Lord Chamberlain's Office,  
St. James's Palace,

February 5, 1864.

Printed by Harrison and Sons, St. Martin's Lane.

NINE  
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Adelphi.	Glasgow.	Opera House, Leicester.
Astley's.	Grafton, Dublin.	Portsmouth.
Bradford.	Haymarket.	Princess's.
Belfast.	Her Majesty's.	Prince of Wales', London.
Brighton.	Leamington.	Prince's, Manchester.
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WITH  
ECONOMY OF GAS.

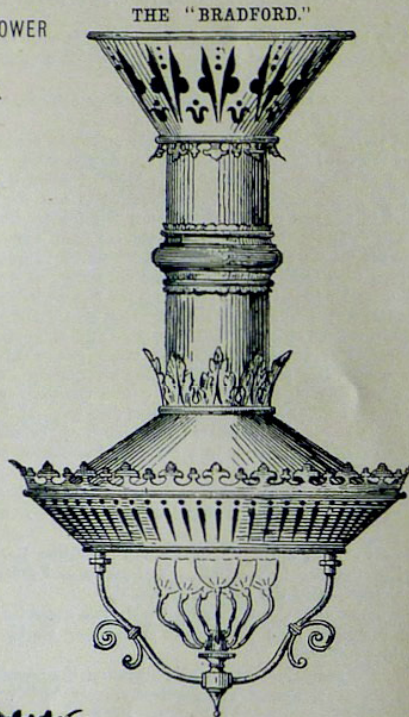
THE "BRADFORD."

PERFECT VENTILATION  
WITHOUT DRAUGHT.

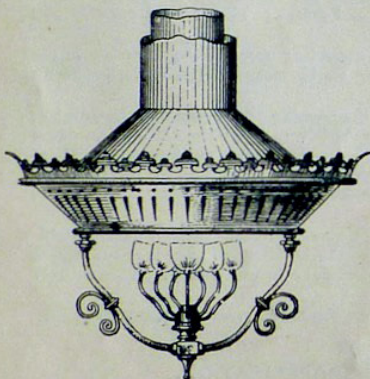
THE "BEDFORD."



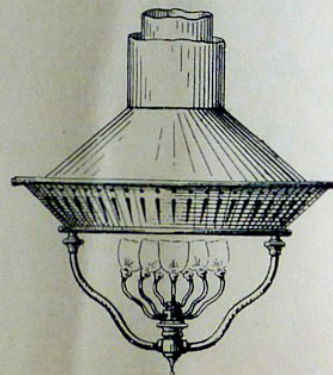
THE "CHESTER."



THE "CARLISLE."



THE "DURHAM."

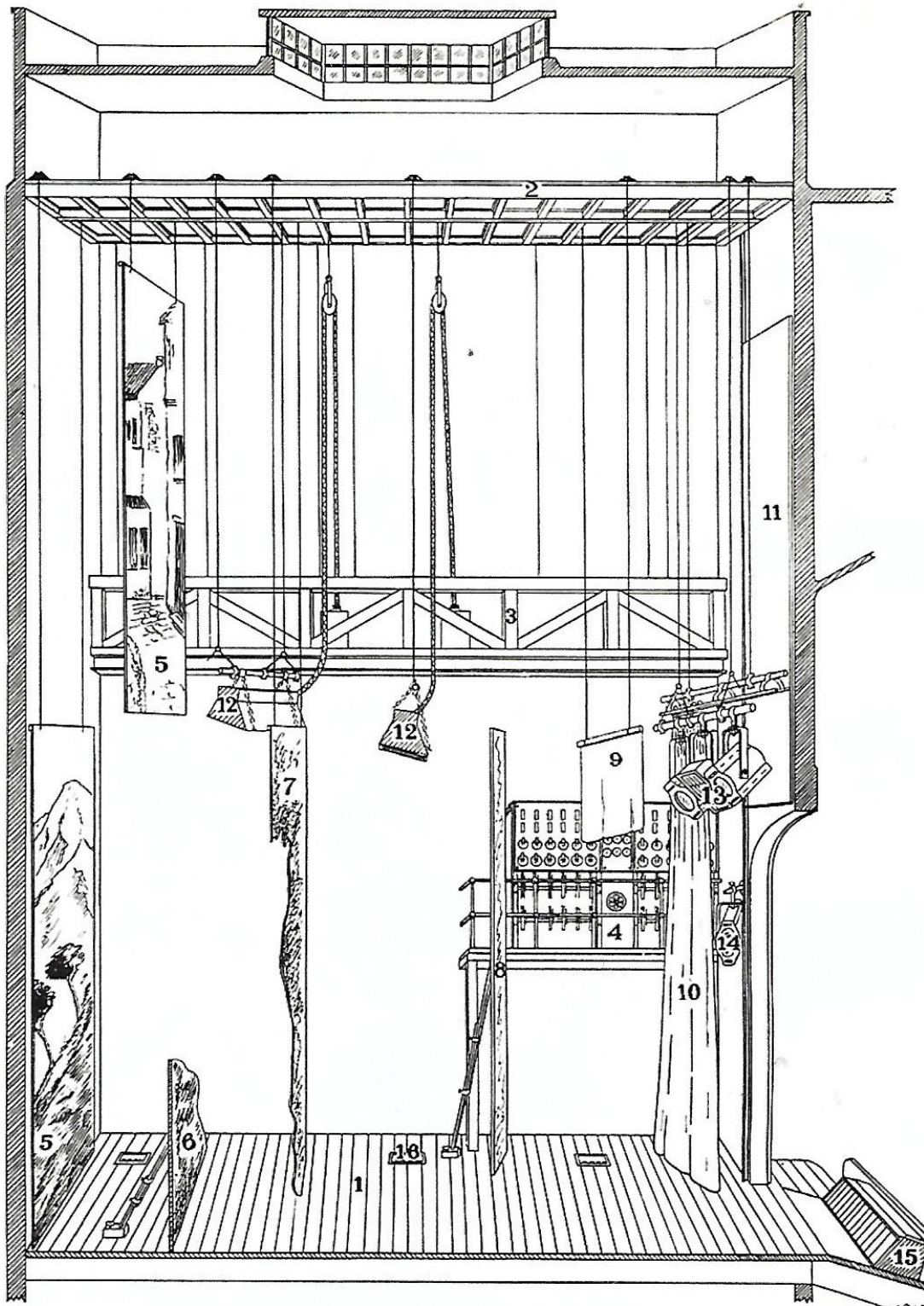


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PALACE, S.E.; 33, Bold Street, LIVERPOOL; 409, Keizersgracht, AMSTERDAM.





REFERENCES—

- |  |   |
|--|---|
| 1. Stage.                              | 9. Border.  |
| 2. Grid.                               | 10. Draw curtains.  |
| 3. Fly Gallery.                        | 11. Safety curtain.   |
| 4. Stage Switchboard.                  | 12. Compartment type batten with "tripe" and connector box. |
| 5. Back cloths.                        | 13. Unit type batten with spot and flood lanterns.          |
| 6. Ground row.                         | 14. Proscenium spot lantern.                                |
| 7. Cut cloth.                          | 15. Footlights.   |
| 8. Wing supported by adjustable brace. | 16. Stage dip traps.  |

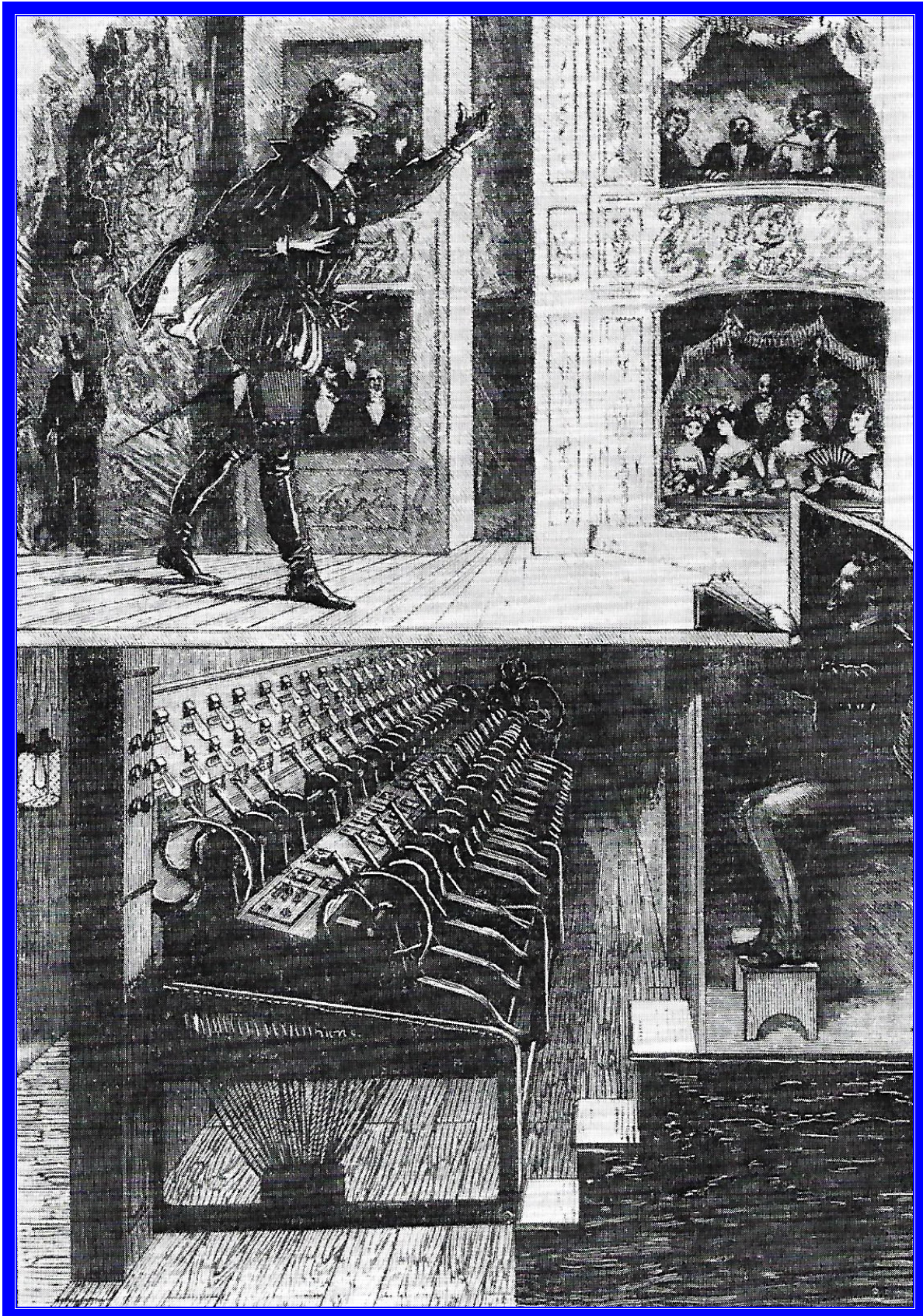




*The History of Stage and Theatre Lighting, 1929 (Edison Electric Illuminating Company)*

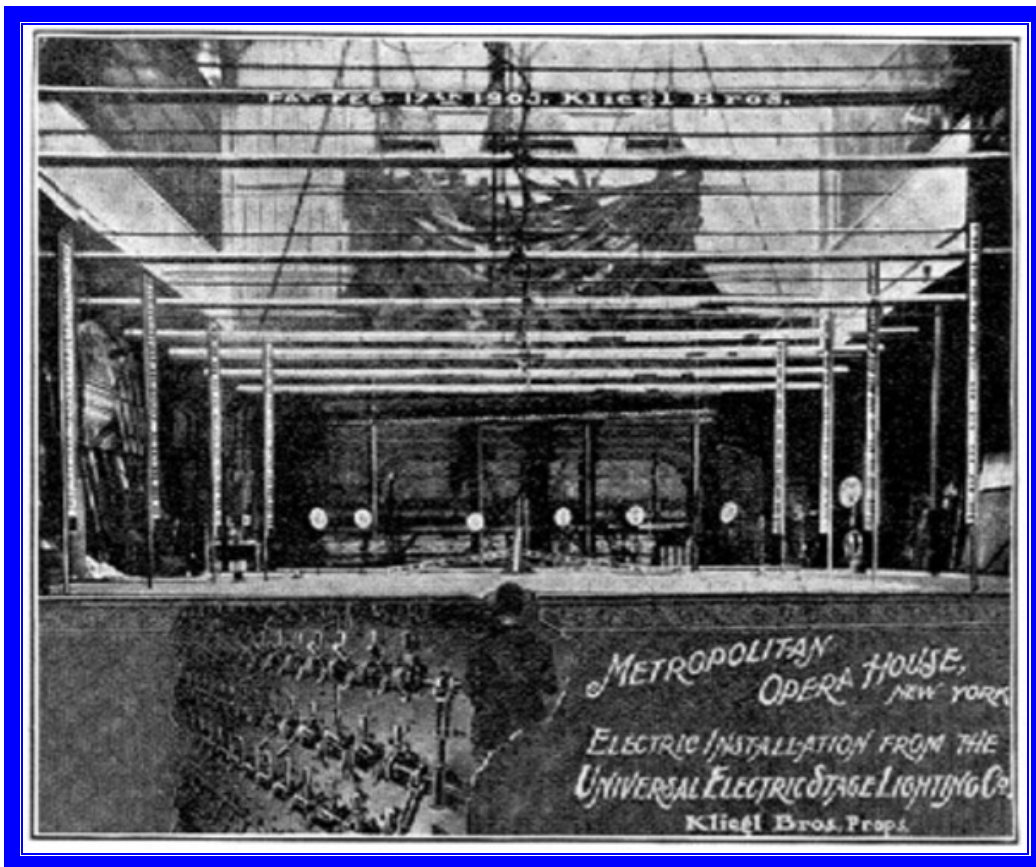
## 1.4 ELECTRIC LIGHTING in the Theatre





*Electric switchboard below the stage of the Paris Opera, 1887 (L'Illustration, Paris)*





*Metropolitan Opera House, New York (Universal Electric Stage Lighting)*



*Portable lighting equipment (Universal Electric Stage Lighting Catalogue, 1922)*



THE CAHN-1912 LEIGHTON **OFFICIAL** 1913 THEATRICAL GUIDE



SNOW  
WATER  
EFFECTS  
FIRE  
EFFECTS  
MOVING  
PANORAMA  
RAIN  
SANDSTORM  
FLYING  
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| Midnight Sun    | Volcano Eruption    |
| Moving Clouds   | Water Ripple        |
|                 | Waving Flags        |



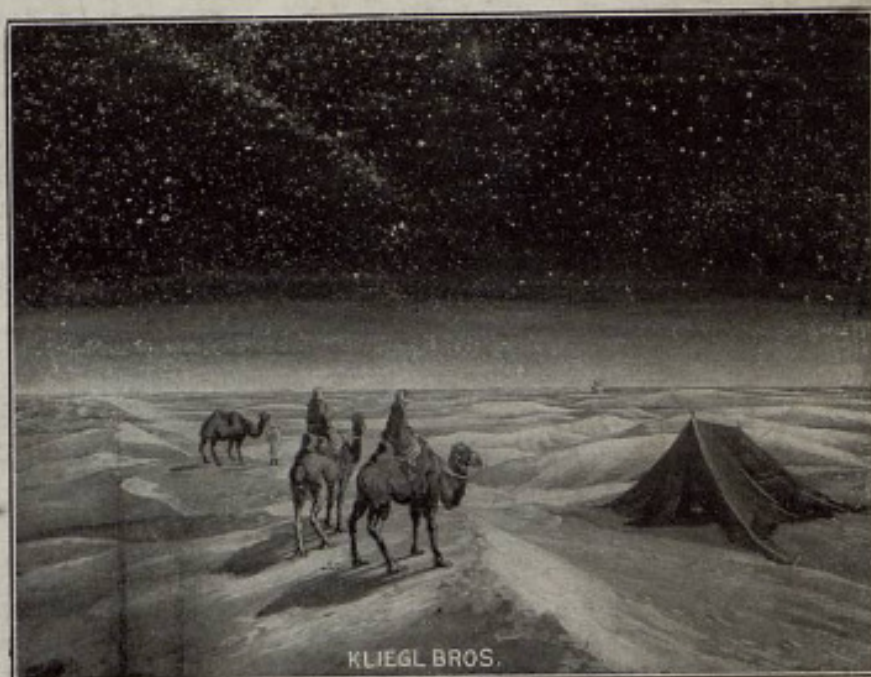
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|-------------------|-------------------------|
| Border Lights     | Stage Pockets & Plugs   |
| Footlights        | Stage Connectors        |
| Proscenium Lights | Plugging Boxes          |
| Bunch Lights      | Lamp Coloring           |
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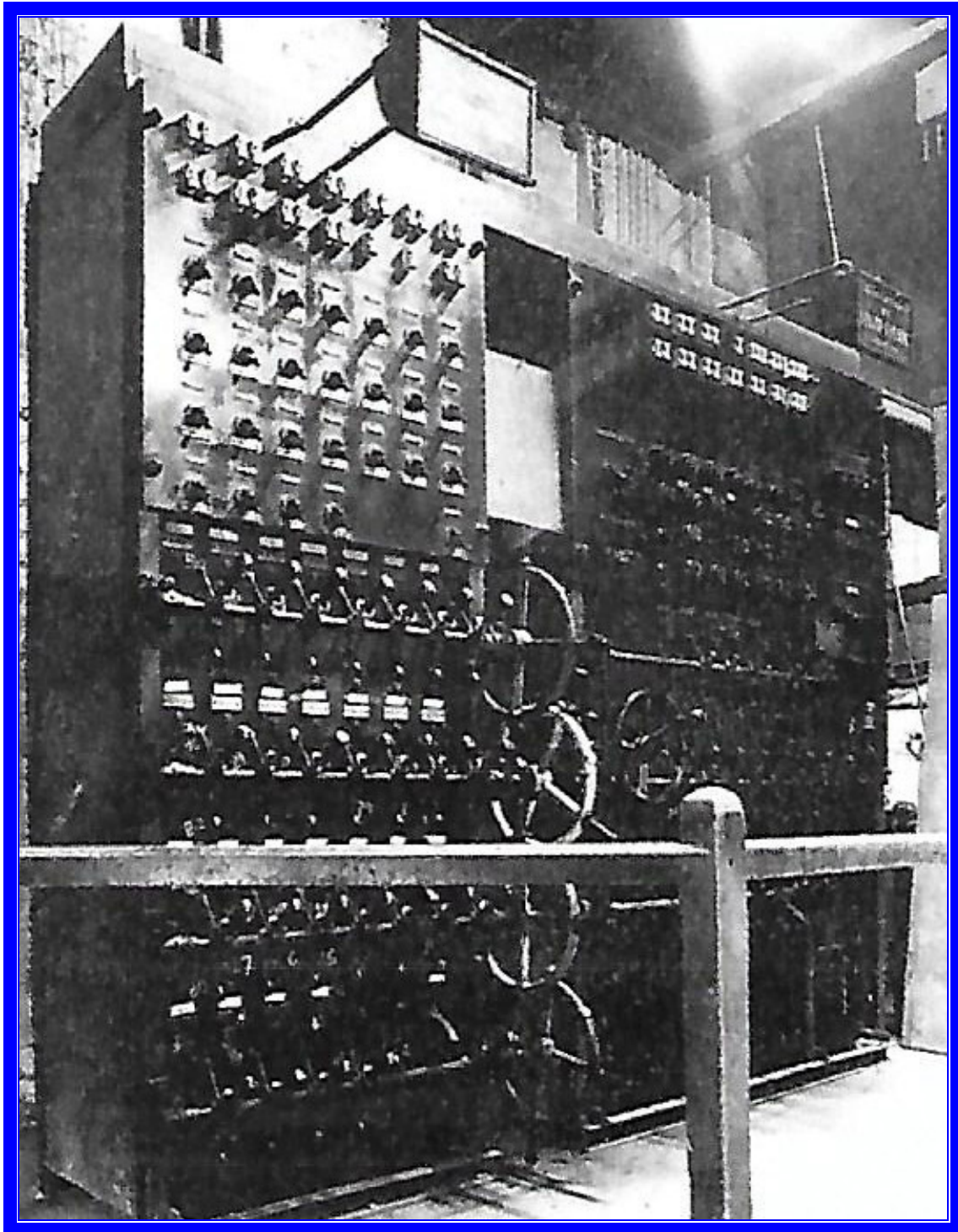
Original effects created for "Madam Butterfly", "Under Two Flags", "Rheingold", "Darling of the Gods", "Ninety and Nine", "Wizard of Oz", "Babes in Toyland", "The Vanderbilt Cup", "Creation", "Galveston Flood", "Fall of Pompeii", "The Land of the Midnight Sun", "The Blue Bird", "The Bird of Paradise", "The Garden of Allah", etc.

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Space is too limited to describe all the different Stage Effects we make and produce.

*For further particulars and prices on Effects, see Catalogue F.*





*The stage lighting switchboard at Buxton Opera House, 1902 (High Peak Theatre Trust)  
It was also provided with a stage and auditorium gas lighting system*





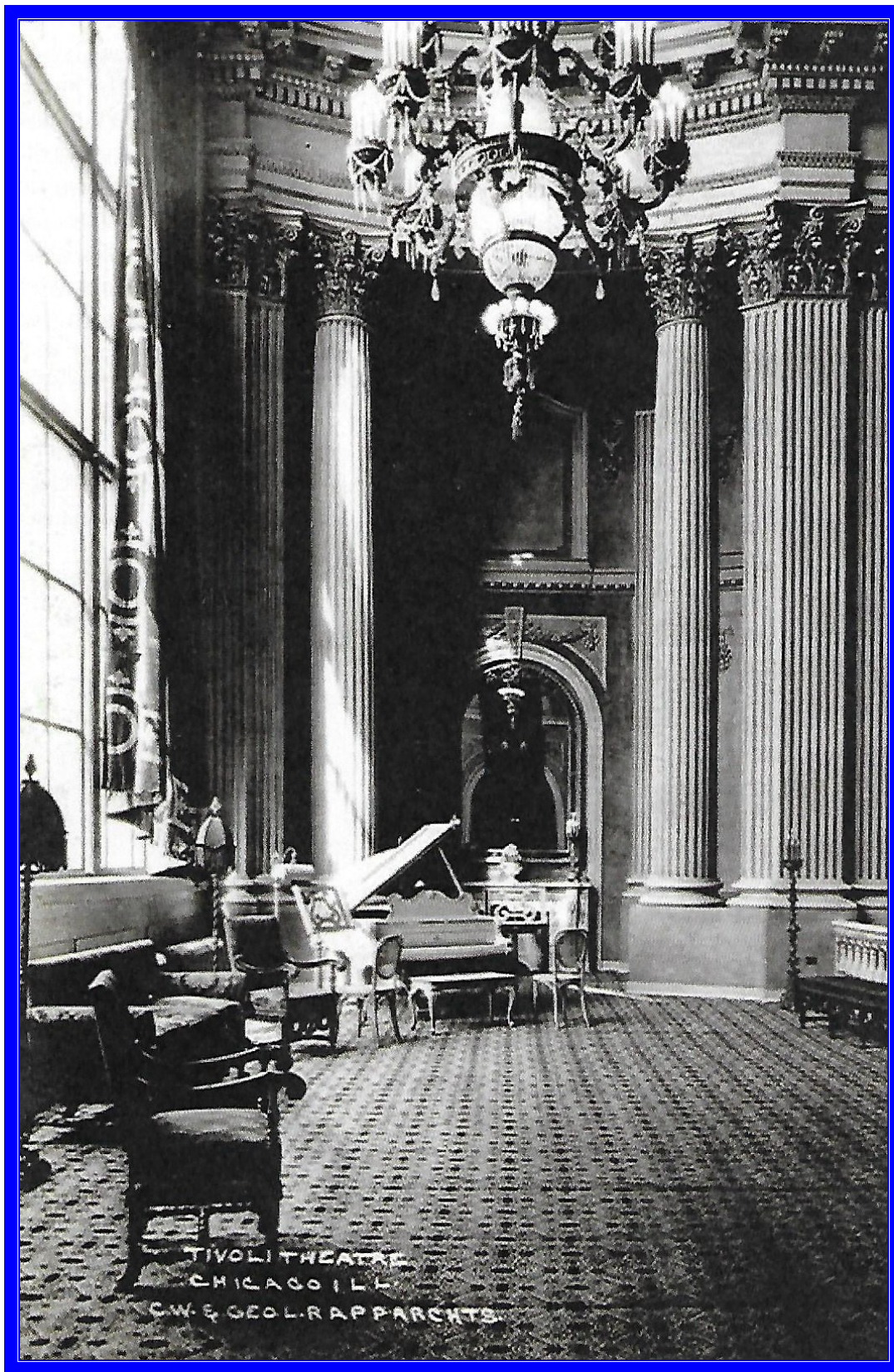
*King's Theatre, Edinburgh 1930 (Victorian & Edwardian Theatres)*





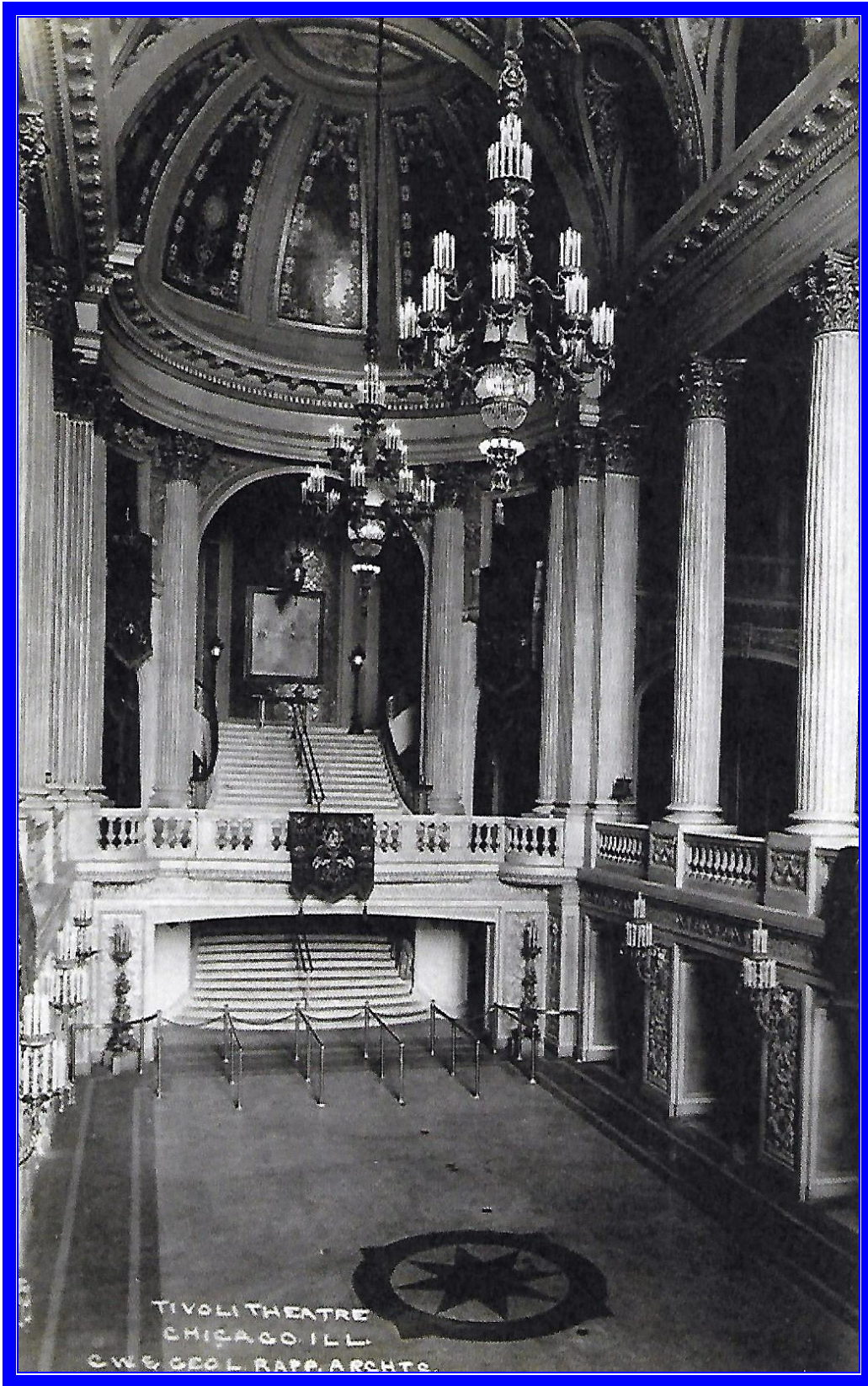
*Palace Music Hall, Manchester 1913 (Victorian & Edwardian Theatres)*





*Tivoli Theatre's Music Room, Chicago 1921 (Rapp & Rapp)*





*Tivoli Theatre's Grand Lobby, Chicago 1921 (Rapp & Rapp)*



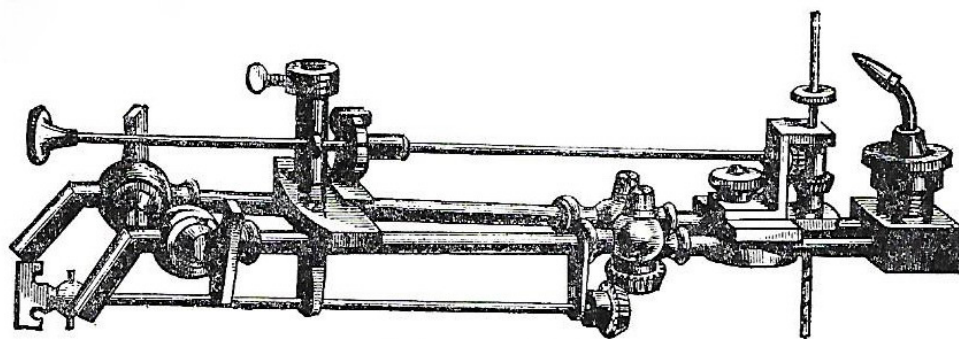


*Garrick Theatre, London 1889 (Scene/Unseen)*



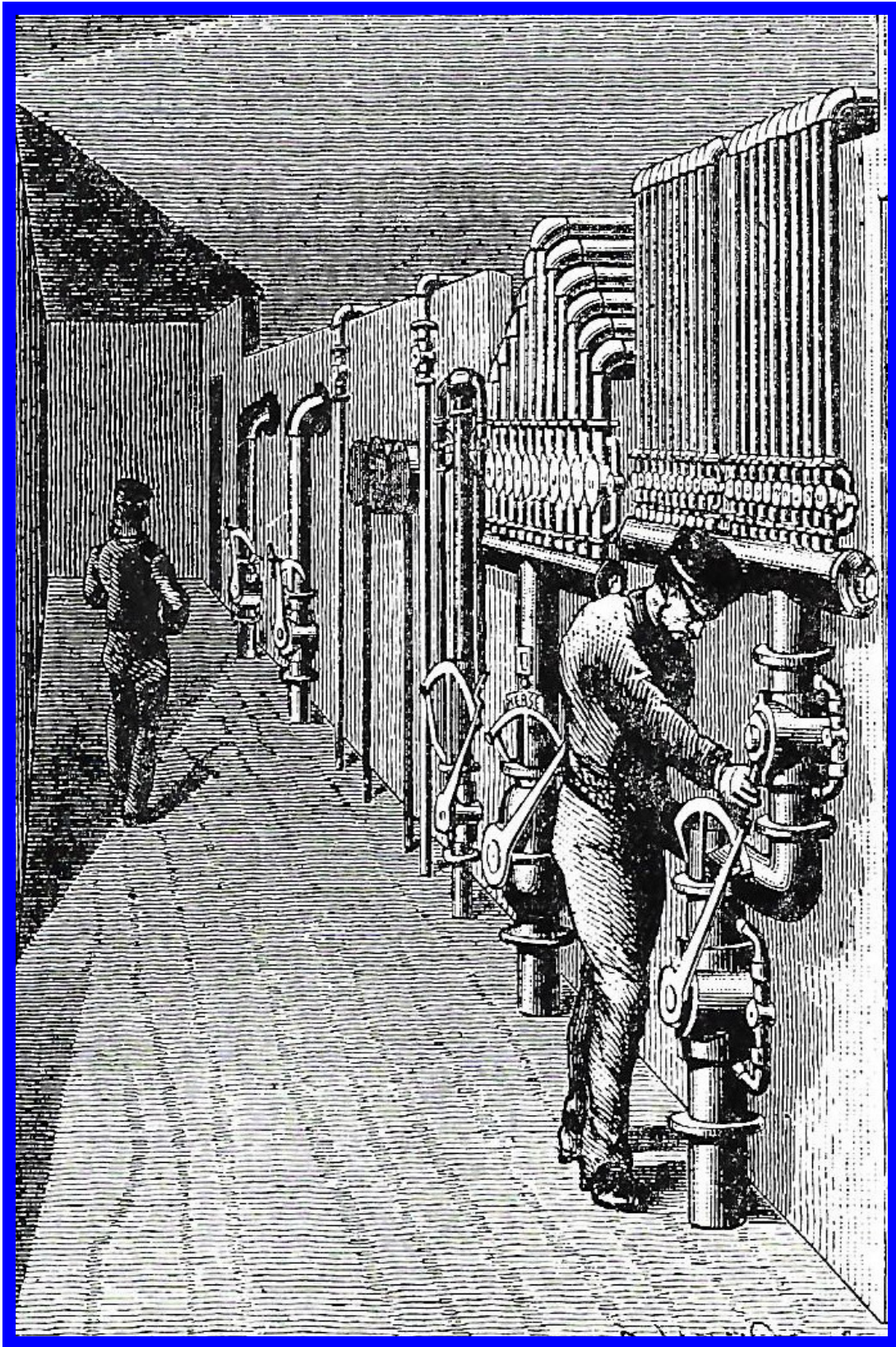
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*Lime-light apparatus (The Magic Lantern: Its construction and use, London, 1890)*





*Jeu d'orgue or Gas Plate at the Paris Opera, 1875 (Theatre Lighting in the Age of Gas)*

*Back cover: Original facade of the Savoy Theatre, Strand, London, 1881  
The first public building in the world to be lit entirely by electricity*



