

Electrifying Lighting at the Lane

FREDERICK BENTHAM

If there is one name in theatre which sets the pulse beating faster it is that of "Drury Lane" or just "The Lane". To play there, to do some work in that theatre or to supply some equipment there is to receive an accolade without equivalent anywhere. It has to be admitted that in recent decades there has not been a lot of logic in this feeling since the place has been dedicated mainly to long runs of one style of show—American Musicals. Even if one allows, as one certainly must, that many of these are the finest examples of that genre; nevertheless the occupation has limited the range of artist who could expect to play a part there.

It is a curious thing that a theatre which proudly declares itself to be the "Theatre Royal Drury Lane" presents only a blank wall to the Lane. The front entrance is in Catherine Street and always seems to have been at that end. The stage door, in the early days connected to Drury Lane by a narrow passage, moved from the East to the North in Russell Street over 200 years ago. In spite of the many reconstructions the theatre is the oldest in London still in use having been built by Killigrew under a charter granted by Charles II in 1662. Nothing of that building survives but it was the theatre in which Nell Gwynn made her first appearance.

The second Theatre Royal Drury Lane was by Sir Christopher Wren and opened in March 1674. It lasted 117 years with some alteration from time to time and was the theatre in which David Garrick and Sarah Siddons played. While under Sheridan it was replaced by a theatre of much greater capacity designed by Henry Holland. It opened in 1794 but burned down fifteen

years later. In 1811 the Benjamin Wyatt building opened and it is from this that the historic theatre we know gets its character in the main. The auditorium is however the reconstruction of 1922. Thanks to the fine drawings of Richard Leacroft it is possible easily to get the feel of the development of this English Playhouse.*

Drury Lane has always been famous for spectacle but particularly from 1886 under Augustus Harris and his successor Arthur Collins so it is intriguing to reflect on what lighting equipment may have been used and precisely how. Above all in the present context who made that equipment?

Recently I came across a reference in *The Illuminating Engineer* of May 1919 in which Mr. G. A. Applebee says that in 1883–6 he was assisting Sir Augustus Harris with his lighting effects by gas and gas limes. He goes on "In those gas days at Drury Lane such a thing as a hard sharp shadow was unknown, partly by the great number of gas burners in the battens and footlights, and partly by the low power of the gas limes and the great distance they were from the object to be illuminated." He then says that;—"Mr. Henry Emden the scenic artist (for many years at Drury Lane) . . . maintained that the heat rising from the gas created an atmosphere which gave the scene a certain amount of life, and from his point of view the electric light gave the painting a hard and cold appearance." This glimpse of the nature of the light from people who knew it well is fascinating. At the time the remarks were made it was only seventeen years since Sir Henry Irving had left the Lyceum and he retained gas because according to Ellen Terry "The thick softness of the gaslight gave illusion to many a scene which is now revealed in all its marked trashiness by electricity."

Though Strand Electric never had anything to do with gas except perhaps to remove some of the installations, there is a connection. The initials G.A. in front of Applebee are not, as one might suspect in these days of slovenly produced newspapers, a misprint. This man—at that time electrician at the Gaiety—was the father of

L.G., the forcible personality who joined Strand in 1922. Our Applebee was in fact the third generation in stage lighting (his grandfather was master gasman at Alexandra Palace) and some affection for all over flooding of light lingered on since he always seemed to judge an installation from the number of battens!

In the present context I am greatly indebted to L.G.A. (as we used to know him) because when he retired at the end of 1957 he gave Brian Legge a manuscript by an engineering student at the S.W. London Technical College. This gives us a discerning eye-witness account of the Drury Lane installation as he had just seen it in 1904. He says "The regulator gear is coloured according to the lamps it controls and is arranged as on the switch-board viz—White, Red Blue. The regulators again are capable of being worked all together, each separately, or one after the other." Such an arrangement is just what one would expect and it also indicates that the regulator and the switch panels formed separate "boards" as was certainly the case when the theatre changed over to AC in 1950. Indeed it is a reasonable assumption that they were the identical boards and probably went in when electric lighting replaced gas in 1898.

They were located in a square recess off stage by the prompt corner. This room was open to the stage on one side but the floor was a few steps *below* that of the stage itself. Even without any masking scenery at all in the wings the view was poor indeed and could be obstructed by members of the cast awaiting their entrance. There was a sense of remoteness from the show quite unlike the feel of the usual perch platform—even when barricaded in by scenery. On the other hand in those amplifierless days the stage manager really did have the lighting just round his corner. The regulator ran along the off-stage wall with tracker wires to the dimmers of "the Lyons liquid type" in the room underneath. According to the same 1904 account "Lamp signalling is used throughout" and there is a detail description of the interlocking of the regulator handles. It goes on;—"The stage is fitted with 5 front battens 45 ft. long and containing 250 lamps and 6 back battens 38 ft. long; in these separate leads are used for each colour

* *The Development of the English Playhouse* by Richard Leacroft (Eyre Methuen).

The D.C. electrical intake room prior to the changeover to A.C. in 1950.



Cavalcade—Drury Lane 1931.

circuit instead of the usual practice of a common return." A revealing glimpse of early wiring practice.

George Wright the present chief electrician at the Lane recalls that they used to duck each time a board fuse blew and showered them with molten lead. Everything was open-front and the fuses merely wire stretched across two terminals. A voltage of 100 DC was not regarded as dangerous but could draw juicy great arcs when a circuit was broken. I well remember my own first sight of the old Drury Lane intake. It was quite awful, as the photograph reproduced on the previous page will confirm. The room was very damp and the walls carried a mixture of old and not quite so old switchgear. The prize exhibit was a large

open knife DP change-over switch. It belonged to the days when there were a number of separate generating stations. If one failed then the whole installation could go over to another though the duty of operating this switch can have been no sinecure!

In keeping track of the history of stage lighting it works out very conveniently that Brian Legge is interested in pre-1914 whereas I concern myself with that time onward—the age of the Strand Electric. Most of this I can cover from my own experience—first as a schoolboy hooked on stage lighting and then actively employed therein. Memory can be an unreliable witness however, but a complete set of Strand's press books and much other

archive material is there to prompt and correct.

The first mention of Drury Lane in Strand Electric's own publicity was in an advertisement of April 1927 where it headed a list of "Latest Contracts". Tracking this down I find that the contract was for "Sunray footlight and battens". The next record, a single advertisement only in the now defunct *T.M.A. Journal* of November 1931 is of "Electrically operated colour changing spotlights" for Noel Coward's *Cavalcade*. There were 26 of these mounted in an ugly sheet metal housing on the dress circle front. The spots were focus lamps with 10' x 6' plano lenses and semaphore frames operated by four large and heavy solenoids. They were 1,000 W and each was individually controlled both in respect of colour-change and dimming but it is difficult to believe that they were used this way very much. Any way they had their own special board. All that can be said with safety is that in shows like *Oklahoma* and *Carousel* they moved en-masse fully frontal, so to speak; but that is to jump ahead.

Even odder is the reference in *The Stage Guide* of 1946 to "Cyclorama top lighting with 36 floods coupled to 36 dimmers." One suspects that this bank of Schwabe lamps was a relic of Basil Dean's 1924 production of *A Midsummer Night's Dream* but—separate dimmers to each flood! The rest of the same summary leaves much to question. The four-circuit footlight and the ten 3-circuit battens all with independent dimmers is fair enough but what can one make of "All dips with ind. dimmers, all dips switch controlled." How many were there and why were they alone singled out as switch controlled? The final line of the entry is indeed a proud one;—"Any requirements can be provided for."

The special board for the *Cavalcade* circle spots had been made by Strand and put in the only position available—across the switchboard room opening, thus denying the operators any view whatever during the years that followed. Space was so tight,



Light console at Drury Lane 1950–1976 showing observation window on operator's left.

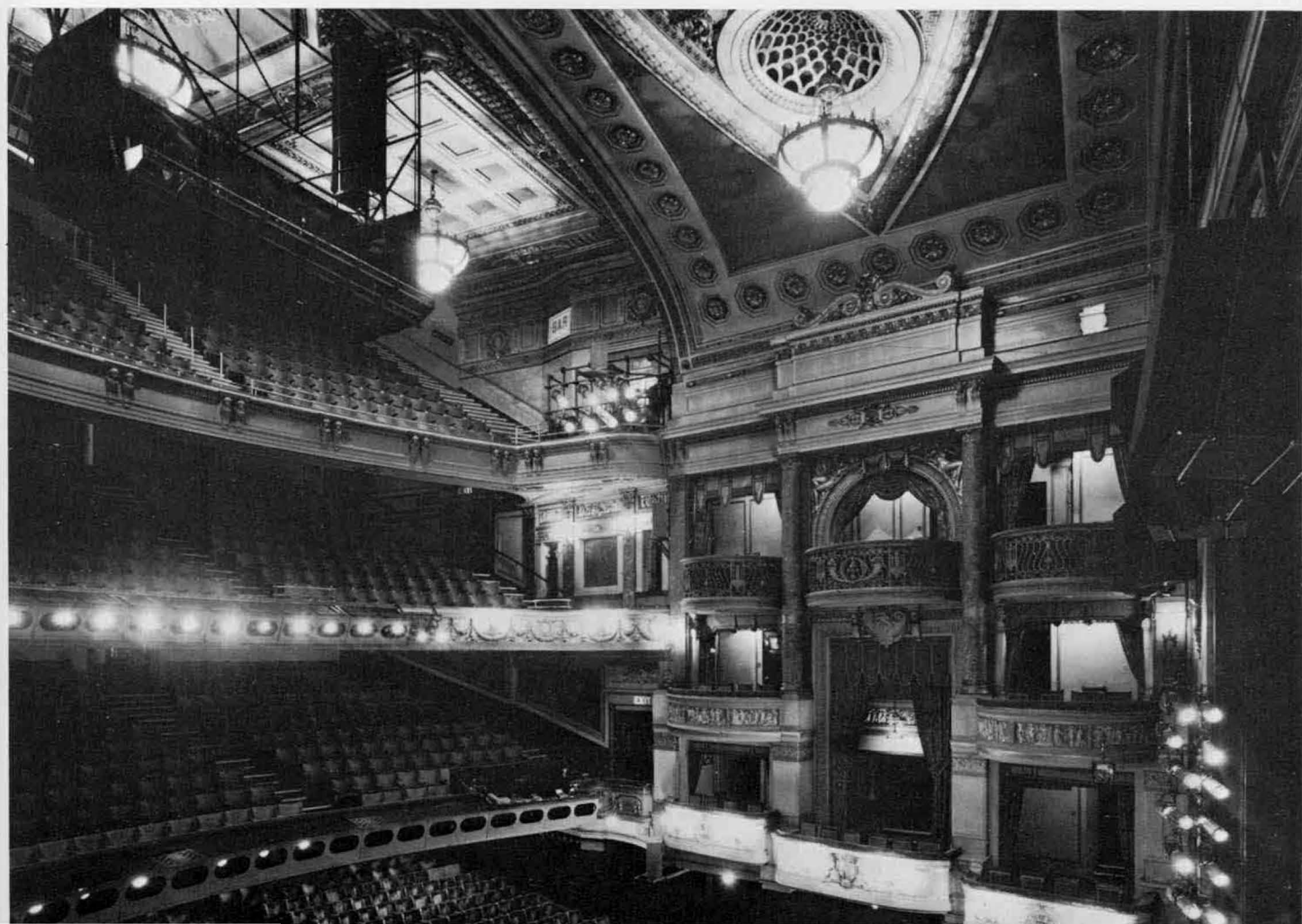
especially back to front, that the resistance dimmers had to be mounted en bloc over the levers instead of behind them. When the stage was at last re-wired for AC the layout was expanded and rationalised though the circle spots were still to have 26 dimmers. The existing separate lighting galleries under the fly galleries provided an unusually convenient location for socket-outlet boxes for all hanging circuits.

At curtain fall Saturday night March 18th 1950 the Strand Contracts department went into action with their speciality—a weekend changeover—and by 10 a.m. on the Monday Joe Davis was conducting the lighting rehearsal. The new switchboard was a three-manual Strand Light Console with 216 stops (dimmers). Anything less like the switchboards which had preceded it, it is impossible to imagine but Drury Lane was no stranger to an organ type console. Around 1870 there was installed the first organ with electric action in Britain. The instrument was by Bryceson of London with the pipes backstage and the console about 50 ft. away in the orchestra pit. It is said to have given every satisfaction and it would be nice, but not true, to say the same of the Light Console.

The design of this control was based absolutely on the idea that the operator should have a good view of the stage. The proper place was “out front” in a box at the rear of the dress circle but it was to be 27 years, when the Console was replaced by a



(above) Lighting layout for Carousel 1950 showing Patt. 56 acting area floods overhead. (below) A Chorus Line at Drury Lane today, showing temporary follow spot room top left; sound control front of the dress circle; additional lighting positions in the upper circle and at the proscenium.





Dimmer room showing STM racks and the vast space vacated by the electro-mechanical banks.

MMS System, before that felicity was attained. Back in 1950 the most that was promised was that it would occupy the old switchboard room on the P side of the stage and a small observation window would be contrived in the wall between it and the auditorium. Even this was out of reach on that distant Monday because nothing could be done until the old boards (all three) could be stripped out and the builders take over. So it was that Paul Weston as the operator was seated in the P side scene dock with his back to the stage, which in any case was completely masked-off with curtains. Only one cue was visible and then only as some reflected light high up on the brick wall.

The lighting rehearsal was a full company call. As *Oklahoma* had already run for nearly three years it was hardly surprising that they could not see what all the fuss was about but to myself as inventor of the console and to Paul this was to be the first night of all first nights. To us a new show had to be rehearsed and plotted with a new control any of whose teething troubles had to be covered up. Worse still was the fact that the change to 240 AC had of course brought a new set of lamps. Everything was too bright and there had to be a lot of checking to levels, something the Light Console was not good at! The new MMS would laugh at the problem—even the lack of view—but in those days one did not dream of recording dimmer levels, let alone set out to do it. Since the tools had been destroyed in the Blitz, the console did not then have the Compton instantaneous group memory piston action which was to become a sine qua non on all the larger Strand electro-mechanical installations. What the Drury Lane job *did* have was a couple of splendid rooms under the stage for the dimmers (the old ENSA air raid shelters) and an extra long flexible cable to enable the console to be moved out into the stalls cross-gangway for rehearsals. Thus the much cherished facility of a stalls control was there in the Lane way back in 1950. Though

decidedly primitive when compared with almost anything in control nowadays the organ action had the merit—unusual for those days—of comparatively few wires in the main cable. For this the cross-relay in the dimmer room was responsible.

However except for the one journey from scene dock to switchboard room the console never budged and when a group memory relay was at last added in a room immediately under the console a short cable only was used. This was for *My Fair Lady* in 1958. Incidentally the full set of 216 dimmers was not required until *Gone with the Wind* in 1972. For *My Fair Lady* ten of the circle spots were moved to their proper place on the Upper Circle, a process that has been completed with *A Chorus Line*.

Today visiting the Drury Lane of *A Chorus Line* with our gaze mainly directed at the lighting equipment, what do we find? First of all the stage door and the backstage does not seem to have altered a bit. And the first time that I entered that door was as a schoolboy in 1925. The show then, was another very successful American musical—*Rose Marie*. This visit was destined to have greater significance than one might suppose. Hanging in “number one” was a bar of Patt. 30 500 W 12 in. Sunray floods pointing vertically down and that schoolboy jumped to the erroneous conclusion that they must have narrow angle beams. He went away to light his model theatre with a miniature equivalent and when, seven years later, he joined Strand Electric he had got so used to this form of light that he had to devise a lantern to provide it. The result was the Patt. 56 with its 24° beam and cut-off—the 1 kW Acting Area lantern which for some years became the backbone of the British way of lighting big shows. It still survives in quantity at the Lane—albeit relegated as working lights backstage. And there is a lot of backstage at Drury Lane!

Even the area covered by the six stage lifts (two hydraulic and four electric) takes one

back less than half the full depth. Overhead at that point hangs the cyclorama—a rigid frame affair of three straight sections joined at right angles by sharp curves—said to date from Basil Dean's *Dream*. This cyc epitomises the problem of this stage; very great depth but except for the scene dock already referred to, not much width off-stage.

The proportions of the auditorium itself are quite another matter. They are unbelievably good for a theatre of 2,283 seats. Nor was 1922–3 when this reconstruction took place, a time when one would expect a vintage example of this style of house to turn up. But it did and is still there for members of the audience to enjoy and what is more they can savour so much of the Wyatt 1811 theatre in the front of house approach thereto.

The house achieves its good sightlines and comparative intimacy without cheating with an overwide proscenium opening. It is 42 ft. 6 in. and this show like the others is not permitted to come out of it. That is the cast and scenery are not; but technological theatre is bustin' out all over. Hanging over the proscenium is what appears to be the biggest loudspeaker in the world, while further back at the circle line a sort of building contractor's bungalow has levitated ceilingwards to house five Patt. 765 CSI spots and their five “followers”.

The front of house spots have been removed from the Dress Circle and have been replaced by 22 of Rank Strand's latest and brightest on the Upper. Only the ugly housing remains as a memento of the false start of 1931. There are new lighting positions at the sides of the gallery and a further array of spots down by the proscenium for all to see. When this last position first fell to lighting (for *My Fair Lady*) the most that was permitted was a vertical row of Patt. 23s—and they had to be hidden. Incidentally that show was the first to be “miked” in Drury Lane and it had to be done very discreetly. Goodness knows what the Ghost thinks on his walks when he comes upon the present sound control hogging part of the front row of the Dress Circle! However the lighting control is content to share Box M with stage management centre back of that circle. The MMS has two rate playbacks and one manual plus the usual other items including a mimic for the 240 dimmers. The installation could be expanded to 360 if the need arises.

Let us end on a couple of piquant notes. With this installation the need to bunch circle spots is at last recognised and there is now a *small* patch panel backstage for the purpose. Secondly, owing to the small size of the STM racks it was possible to install all twelve with the 240 thyristor dimmers along one wall of the existing dimmer room. The big electromechanical Light Console banks with their Sunset resistance dimmers continued to work the show right up to the end. This came on Sunday the Fourth of July when the curtain fell on a “star spangled bicentennial gala” *America*. As with *Oklahoma* 26 years earlier, it was Joe Davis who did the lighting; but this time the Strand Contracts department's own speciality—the weekend changeover—took place immediately after.