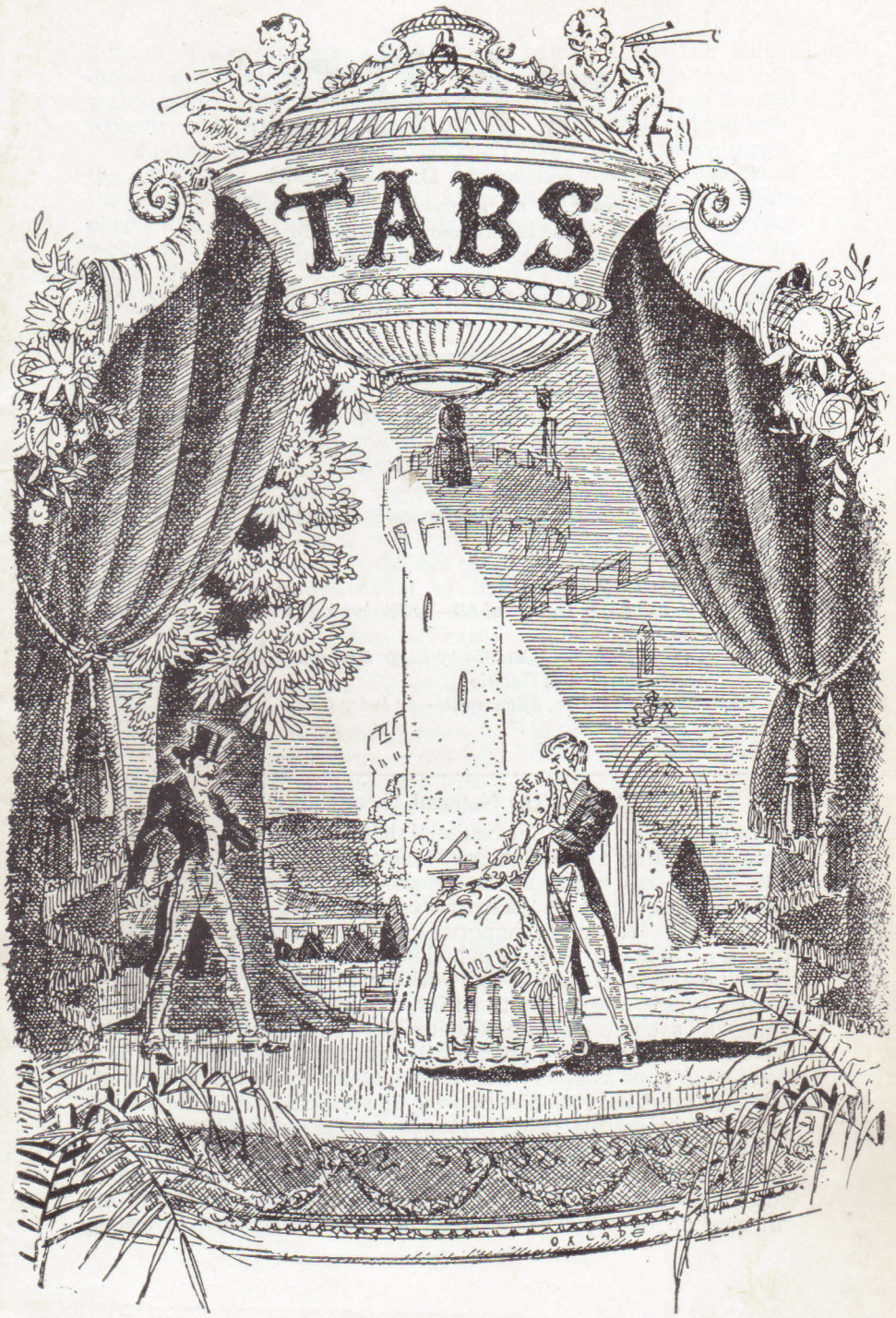

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TABS

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The Strand Electric and Engineering Co. Ltd.

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CONTENTS

The National Theatre

At last the architect for our National theatre has been appointed and in congratulating and welcoming Mr. Denys Lasdun we must confess that we are not happy at the remark reported at the time of the announcement in which " a masterly approach to architecture " was said to be " far more important than experience in designing theatres ". Where experience in building a previous theatre is valuable is in providing experience of working with theatre people. It is theatre people, the brilliant and inspired architect notwithstanding, who will have to provide the detailed brief to which the building will have to be designed. As a working and practical theatre it will be as good or as poor as this brief. Unfortunately theatre people have not for some years been good at drawing up such briefs. At this moment, moreover, when the Old Vic reopens as the National theatre with the largest proscenium and house tabs ever installed there and performs therein two brilliant productions taken, however, from a stage with the audience on three sides and no house tabs at all, the drawing up of a detailed brief is likely to be more than usually

difficult. Theatre people with ideas are bound to be such individualists that it is impossible to reconcile the thinking of one great man with another, and discussion between them, as Edinburgh showed recently, only stimulates debate and not very good debate at that.

Fortunately the answer is to hand in the various committees of the Association of British Theatre Technicians. These are formed of the practical men of all technical branches of the theatre who think deeply and keenly on the problems of theatre design, otherwise they would not volunteer to give so much of their time to serve in this cause. Hence, once the grand design has been settled, the architect can be advised on the niggling details by which the theatre will finally be judged as good, practical to work in and comfortable to attend.

Christmas Greetings

For some years now it has been the responsibility of the Editor of TABS to dream up some topical item which could have a theatre slant applied to it and when suitably framed in a coloured cut-out of our cover make a Christmas Card. Recipients have been of two kinds, those who have welcomed the card as very unusual and those who have roundly declared that they did not see what was Christmassy about it. It seemed to us opportune, now that there will be an extra issue of TABS each year, to drop this four-page highly coloured caricature of our magazine with its stanzas penned by Strand's tame poet in deepest Gloucestershire.

. . . did not see what was Christmassy about it

In announcing that there will be no more official Strand Electric Christmas cards we do send our best wishes to all our readers and we apologise to all those who, thanks to over-much of the season's spirit being about at Head Office, got half-a-dozen copies of the same card and to those who for the same reason got none at all.

1914 – 1964

Next year in March, we the Strand Electric celebrate our Golden Jubilee in appropriate ways, including the introduction of a new type of spotlight, special demonstrations in our theatre and by turning TABS into a quarterly and devoting a special bumper issue to a history of the firm, its people and its doings during this time. Your editor, who is the author of this opus, has as befits this journal not treated his subject too seriously and must confess to having enjoyed his task enormously. As a foretaste of our March issue we publish " Tin Mug " in the present issue which takes the form of one of our old boys (Joe Davis, H. M. Tennent's lighting director), memories of his first days with us in 1925–35.

JUBILEE LECTURE PROGRAMME

These lectures will be given at our Head Office Demonstration Theatre, 29 King Street, Covent Garden, W.C.2, and will begin at 7 p.m. *precisely* except for that on January 22nd which commences at 6.30 p.m.

Admission to demonstrations and for the Open Day is free, but tickets are necessary and can be obtained by sending a *stamped addressed envelope* to 29 King Street.

Wednesday, January 22nd

" Evening Course on Stage Lighting "

A talk and demonstration. The first half will deal with lighting equipment and its use and the second half with dimmers and the lighting rehearsal. The course will be conducted by Frederick Bentham and Brian Legge.

Thursday, February 6th

" Lantern Slides from the Archives "

The Strand Electric collection of slides in London, amassed through the years consists of some 300 3¼ × 3¼-in. black and white slides and over 900 2 × 2-in. colour transparencies, not counting duplicates. It is intended to display some of these which do not get shown in our lectures. Comment on the slides will be given by L. G. Applebee, Frederick Bentham, Percy Corry and Paul Weston.

Friday, February 14th

" Colour "

A lecture by Frederick Bentham in which light sources and a means of colouring them are examined and demonstrated in detail. The various applications of coloured light to the stage will be considered.

Wednesday, March 4th

" Fifty Years of Stage Lighting "*

A special Golden Jubilee demonstration covering the development of stage lighting equipment and technique in the 50 years of Strand Electric's existence. From gas and limelight (for good measure) through the twenties and thirties right up to date—today's practice.

*Repeat performances Thursday, March 12th and Friday, April 3rd.

Saturday, March 21st, 10 a.m.–12.30 p.m.

" Open Day at Kennington "

Strand Electric have quite a township on both sides of Kennington Lane, S.E.11. Here are situated both the Hire and Sales stores and three of the four factories. Vauxhall Works produces the lanterns on a mass production basis, Kennington Works resistance dimmers, the Junior 8 and all-electric dimmer racks including those for silicon controlled rectifier dimmers, and the Transformer Works saturable reactor and transformer dimmers and other wound components.

THE PLAYHOUSE, NOTTINGHAM

by Peter Moro, F.R.I.B.A.

The brief for this theatre sounds deceptively simple: to provide an adaptable theatre seating 750. In fact, to do just this is as difficult an architectural problem as one could wish for. Flexibility of staging has been tried many times but has rarely been solved successfully and certainly **never on a scale of a theatre seating as many as 750.** Subsequent research has confirmed this and the inevitable tour of German theatres has not helped in finding a solution. Although we accepted the proposition that adaptability was a desirable feature of a theatre of this kind, it was quite clear to us from the start that it would be futile on this scale and with the funds available to attempt a solution whereby Coventry could be turned into Chichester simply by pressing some buttons. What we have tried to do is to provide

Fig. 1. View taken from back row of stalls. The house tabs have been painted in to complete the photograph because the lighting bridge could not be raised for our photographers as the counterweighting was then incomplete. The seats are covered in peacock coloured moquette. Timber slatting painted matt black with fire-resistant paint forms a grillage in front of the auditorium wall. The space between is used for acoustic treatment where necessary and contains loudspeakers for sound effects. The slatting is cut away to form illuminated decorative gold bands. The balcony is left in natural concrete, textured with the impress of the boarded shuttering. The curtain is golden yellow velvet. The loges either side will be backed by a curtain of glass fibre and gold in colour.

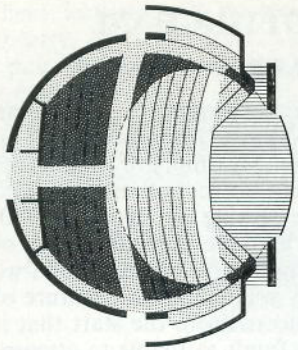


Fig. 2

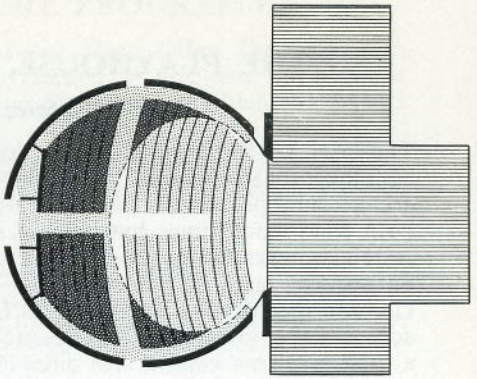


Fig. 3

within one building the essential characteristics of the two basic stage/auditorium relationships, namely, the open stage and picture-frame stage. We have shaped the auditorium in such a way that in its cylindrical form it clearly envelops the audience and performance in one architectural space when the forestage is in use (Fig. 2). Alternatively, it is possible to take the action out of the auditorium and place it in a different space which is seen through a wide gap in the wall of the cylinder (Fig. 3). In this form, the picture-frame stage, we have deliberately avoided the use of a frame and have eliminated all the usual clutter which so often tends to separate the actor from his audience. If we are successful in this the resulting opening should have the effect of connecting rather than separating. Both forms are designed to look architecturally intentional and without a hint of bias or makeshift adaptation. The mechanical means of achieving this transformation are kept to a minimum and consist of a mechanically operated forestage which can be lowered to form an orchestra pit.

Whenever economies had to be made, these were effected by using less expensive finishes and by simplifying detail, but never by reducing dimensional backstage requirements. The result is a building with ample wing space and flying facilities, proper work-shops, sufficient dressing room accommodation, a rehearsal room, a green room and so on. These are all things which should be taken for granted in a modern theatre but are unfortunately rarely found in this country.

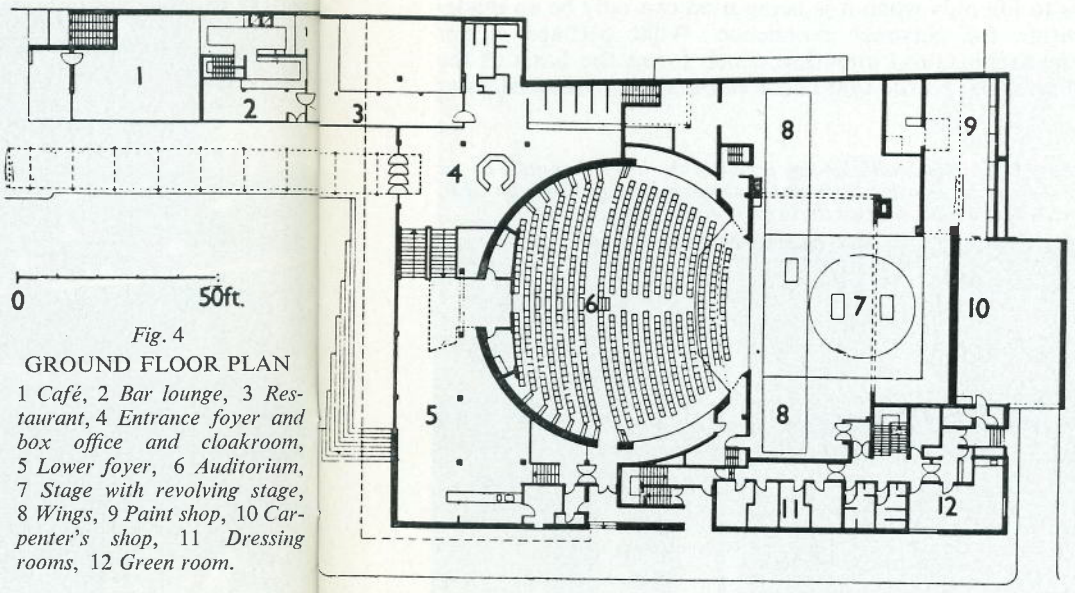


Fig. 4
GROUND FLOOR PLAN
1 *Café*, 2 *Bar lounge*, 3 *Restaurant*, 4 *Entrance foyer and box office and cloakroom*, 5 *Lower foyer*, 6 *Auditorium*, 7 *Stage with revolving stage*, 8 *Wings*, 9 *Paint shop*, 10 *Carpenter's shop*, 11 *Dressing rooms*, 12 *Green room.*

Fig. 5. View taken from the side of the circle level. Top right can be seen the drum feature to provide centre ceiling down-stage and apron-stage lighting position. On extreme right is an apron stage entrance with " Juliet's balcony " over .and this is repeated on the other side of the proscenium. These entrances can be shut off by doors of the same treatment as the auditorium wall so as to be invisible when not in use.

Externally, the building makes a clear architectural statement, its main elements visibly expressed: the concrete drum which is the auditorium surrounded by glazed foyers and dominated by the fly tower which marks the focal point of the composition. The general character aimed at was of a building alive and exciting which

Fig. 6. View from apron stage entrance. Orchestra lift rises to stage level as two sections to provide a greater or lesser depth for this purpose. Orchestra wall supports foreground are removable. Lighting control box window is visible at rear of stalls.

radiates an atmosphere of glamour appropriate to a place of public entertainment. This we hoped to achieve by the handling of space and dramatic lighting rather than by the use of luxurious finishes.

Now that the building has been completed and is in use everybody can see for himself whether we have succeeded in achieving what we set out to do. To describe or even photograph a building which comes to life only when it is being used can only be an inadequate substitute for personal experience. What perhaps is not obvious is the architectural intention which forms the basis of the design and it is for this reason that I have elaborated on this particular aspect.

Fig. 7. Stage from P side wings with lighting bridge in the lowered position on the left. 26 ft. revolve can be seen in centre and cyclorama lighting bank top right. Partially raised black shutter shows paint frame room beyond.

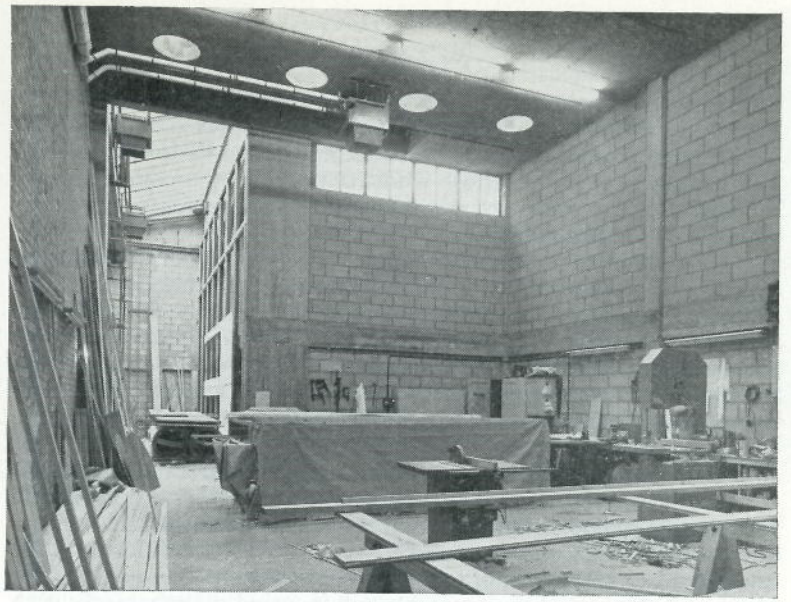


Fig. 8. Scene shop with paint frame in left background.

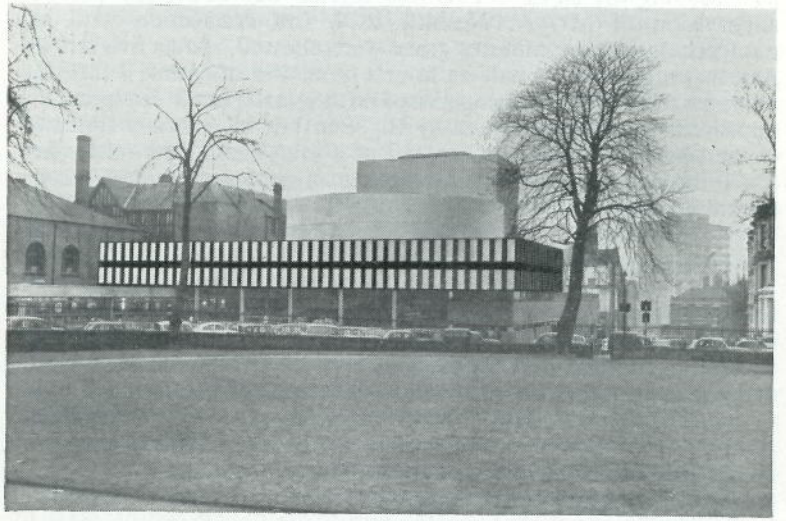


Fig. 9. Exterior showing massing of auditorium cylinder with stage tower in background and foyer and entrance block in front.

TIN MUG

by Joe Davis

Should you visit the Strand Electric hire showroom, I doubt if you would find a mug on view in the extensive display of fittings. The unsuspecting reader may well ask what have mugs to do with lighting and I am sure there are those who would find some connection. In my case a mug represented one of my first achievements in a career which started at the Strand Electric.

In December, 1925, accompanied by my mother, I presented myself at the premises of the Strand Electric, 24 Floral Street, to be interviewed for a " position ". A position seemed a little more attractive than a job! My mother having convinced the foreman of the sheet metal shop that he would never regret having the foresight to employ such a potential gift to industry (subsequent events have proven this was not strictly true), I was engaged at the princely sum of 3½*d.* per hour.

The following Monday at 8 a.m. I clocked on and reported to the sheet metal shop rigged in the costume of the worker, i.e. bib and tucker blue overalls. I never knew why, when wearing this official garb of the artisan, the trouser legs were invariably at different deads and usually exposed 2 in. of sock. The socks were never a good colour blend with the rest of the ensemble and incurred many remarks such as " up on the short ", " down on the long ", etc.

The normal hours were 8 a.m. till 6 p.m. and 8 a.m. to 1 p.m. on Saturdays, timed by a card clock system referred to by the workers as "bashing the clock". This was carried out under the personal supervision of Mr. A. Nesbitt, R.N. (no connection with any namesake), and five minutes grace were allowed. After five minutes past an employee lost half an hour's time, and of course 7 farthings in wages. The clock was supervised with quarter-deck discipline and appeared to be checked not by Big Ben but by a heavy timepiece carried by Mr. Nesbitt on the end of a long chain. No matter how much the panting hot-bodied latecomer might argue, that watch was the final verdict.

I was introduced to a world of cowled gas rings, gas fumes and the pungent smell of spirits of salts as the hot soldering irons were plunged into the pot, the hammering of rivets, sheet metal of every size and shape and tea in large tin mugs, cheese cakes and bread and dripping—the staple diet for the tea breaks. The tin mug was made by each tinsmith to his own capacity and design. This shop produced every type of lantern used in those days and the craftsmanship was of a very high standard. From very scanty drawings they could produce a flambeau, candelabra, trick boxes, intricate signs and chandeliers that looked real, and, of course, tin mugs.

One of the favourite lanterns being made at that time was the Patt. 23*. The metal used was blue steel (not Blue Streak) a specially

** This lantern was superseded by the Patt. 43 and many years later the number was allocated to the now well known Baby Spot.*

processed sheet metal with an oily content and surface. The top of the Patt. 23 had louvre ventilation and when first lit emitted an oily smoke spiral. This could have been the prototype for the present-day smoke gun. These lanterns or a modified version were being installed as F.O.H. spots in some theatres—a modest start by 1963 standards.

This was the period of C. B. Cochran, Komisarjevsky, Julian Wylie, Basil Dean, Hassard Short, the Covent Garden Sporting Club, 110-v. D.C., pot liquid dimmers, a strike to end all strikes,* theatre staff outings, bowler hats, big smelling pipes, battens and floats and in the theatre the smell of lamp lacquer, as many theatres still had the open type float and batten.

After 18 months making countless colour frames and my own tin mug, I found a means of escape in the form of Mr. Mark Stables, who was then known as the outside foreman. By his kindness and no doubt to the relief of Mr. Buckle, the sheet metal shop foreman, I was transferred to his staff, known as " the tape and string department " because they invariably worked on temporary fit-up and outside installations. This meant leaving many good friends, including a slightly soiled tin mug.

For the next few years I worked on every conceivable type of lighting, covering outdoor pageants such as Greenwich Naval College and the Tower of London, fit-ups of new productions, exhibitions, eisteddfodau and installations ranging from the Baird television studio at Alexandra Palace to the re-wiring of the Adelphi and the Savoy. Even in those days the password at the stage door was " Strand Electric " and you were invariably let through without comment.

It was during this period that I was sent out to work on productions to fit up special equipment and work with producers on the lighting of their productions. It was on one of these productions, *The Good Companions*, that I first got to know Jack Madre. I believe we are still friends. From that time I appear to have been in a constant state of production except for a season with the R.A.F., when again I was issued with a mug. The indent read something like " airman for the use of " and was of the rare chipped enamel type. But even during that tour I managed to get myself mixed up in shows and during the latter part of the war did an extensive tour of the Far East with Sir John Gielgud's *Blithe Spirit* and *Hamlet*.

In 1935 I joined H. M. Tennent Ltd., but still retained a close association with the Strand Electric and its staff. I have watched their progress with great interest and appreciation because I, like so many others, have a great deal to thank them for and am ready to congratulate them on 50 years' service and development in the theatre, aided by a staff who have worked with " the show must go on " attitude, and have often made the impossible possible. I still have a great affection for that tin mug, maybe because, like the Strand Electric, it was made with a little personal effort and no strikes.

** The General Strike, 1926.*

Fig. 1. *Prelude—the Nornen.*

THE RING AT COVENT GARDEN

The production of *Die Götterdämmerung* at the Royal Opera House, conducted by Georg Solti and produced by Hans Hotter last September with the décor by Gunther, featured a ring structure which is also to be used as the basis for the complete cycle of Wagner's *Der Ring der Nibelungen* next September. There will incidentally, by then be a brand new lighting installation and Strand switchboard. Meantime the following details and the photographs of the scenery of *Götterdämmerung* have been given us by William Bundy, the stage director.

The basis of all scenes is a circular structure 46 ft. in diameter

Fig. 2. *Act I, Scene* 1. *Valkyrie Pool.*

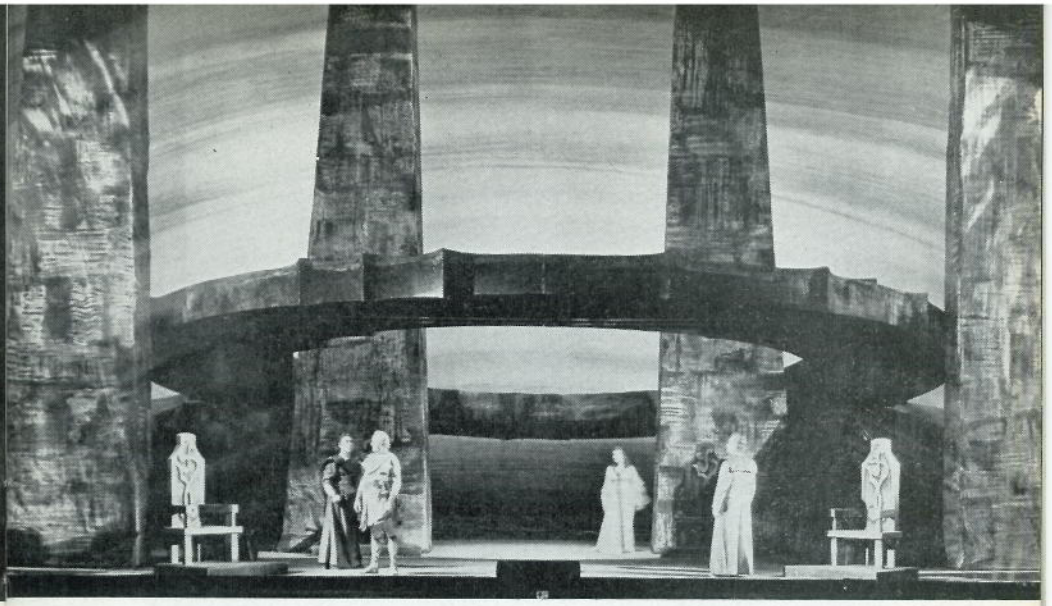


Fig. 3. *Act I, Scene* 2, *and Act III, Scene* 2. *Hall of the Gibichungs.*

and 8 ft. between its inner and outer periphery. It is made of 6-in. aluminium girders joined as the eight segments of the circle. This is supported on eight 12-in. aluminium girders and can be tilted or raised level to a maximum height of 15 ft. above the stage by means of four motor-driven screw jacks. The jacks can be driven separately, in pairs, or all four together.

To achieve the diagonal tilt of Act II (Fig. 4) the screw jack motor units are turned either 45° or 180° by a secondary motor.

As the productions using this device have to be fitted into the normal opera and ballet repertory the whole unit is designed for quick erection and dismantling—six hours to build and three hours

Fig. 4. *Act II. Outside the Hall of the Gibichungs.*

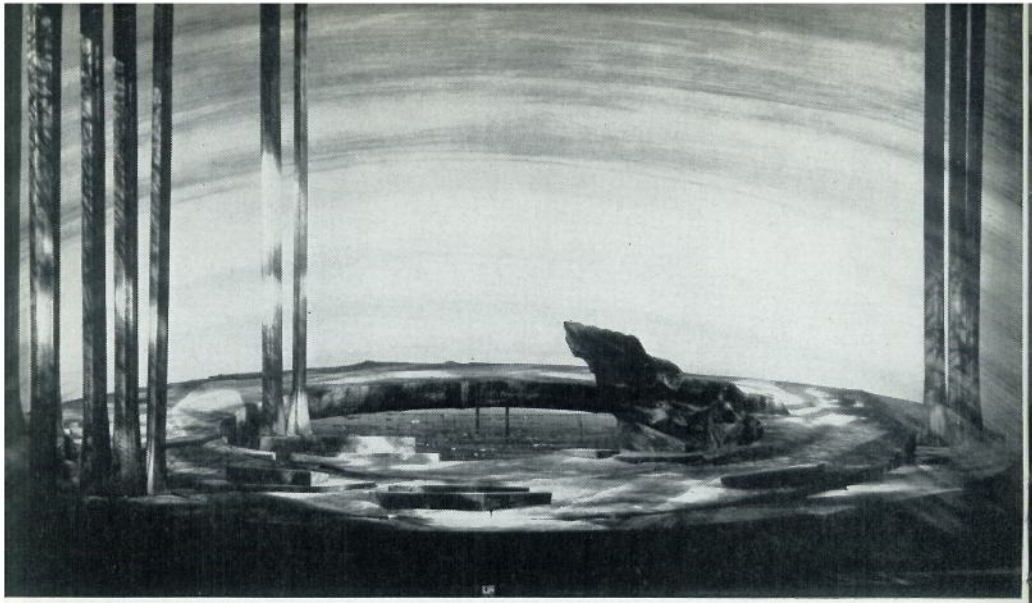
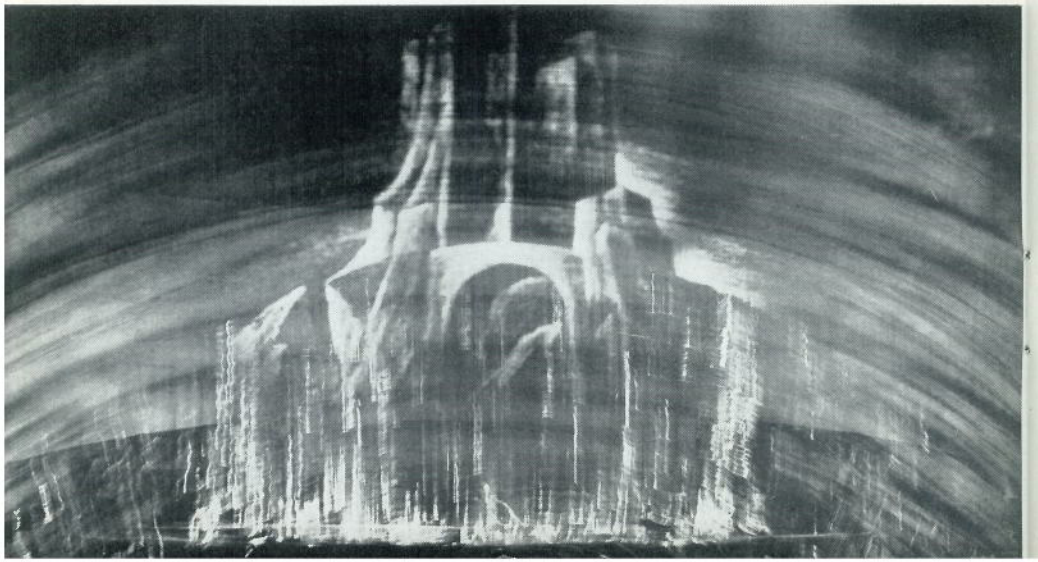


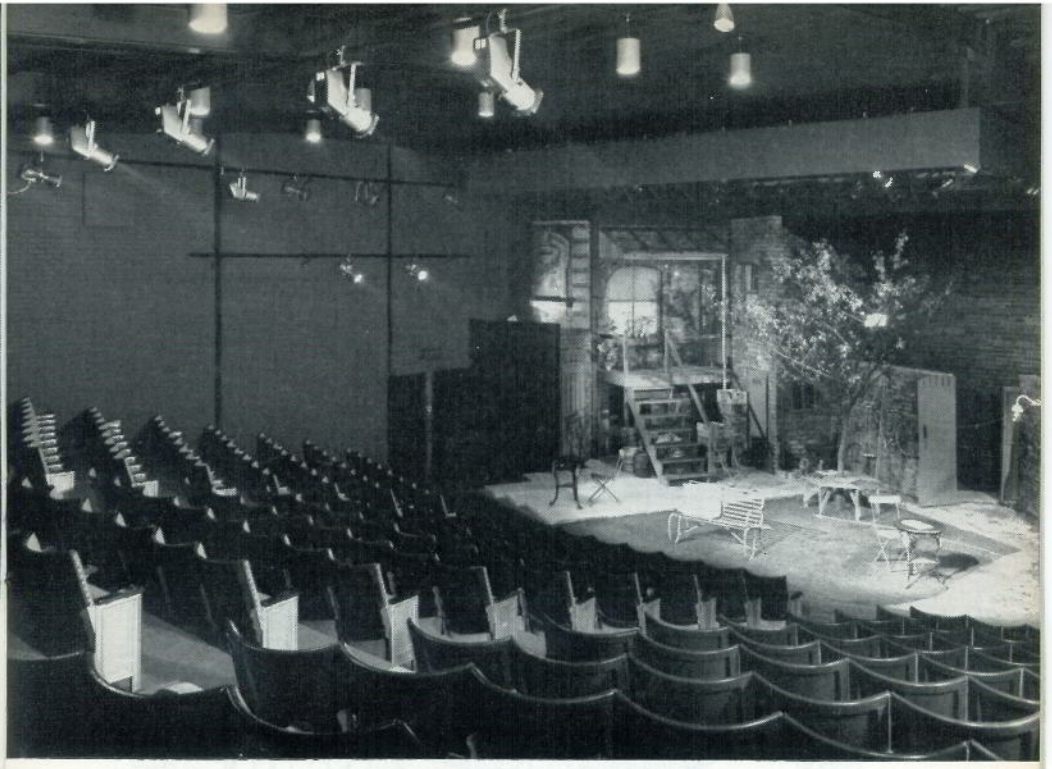
Fig. 5. Act III, Scene 1. Banks of the Rhine.

to strike. The whole mechanism was designed by William Tottle and manufactured by Hall Stage Equipment.

There is a painted cyclorama 160 ft. long × 66 ft. high on two hoists (one to trip the cyc. for quick changes) inside the track of the opera house's permanent "roller cyc". *Götterdämmerung* has a regular orgy of optical projection to achieve the various transformations including the final overflowing of the Rhine and destruction of Valhalla (not shown here because of the impossibility of photographing moving effects). For this optical work 14 Reiche & Vogel (German) projectors and 18 Strand Electric projectors are used, the wattage ranging from 5-kW to 1-kW.

Fig. 6. Act III, Scene 2. After the destruction of the Hall of the Gibichungs—the appearance of Valhalla.

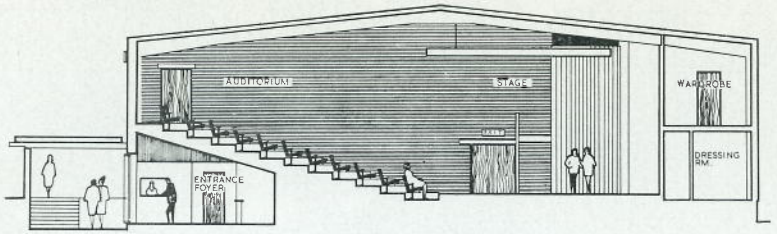




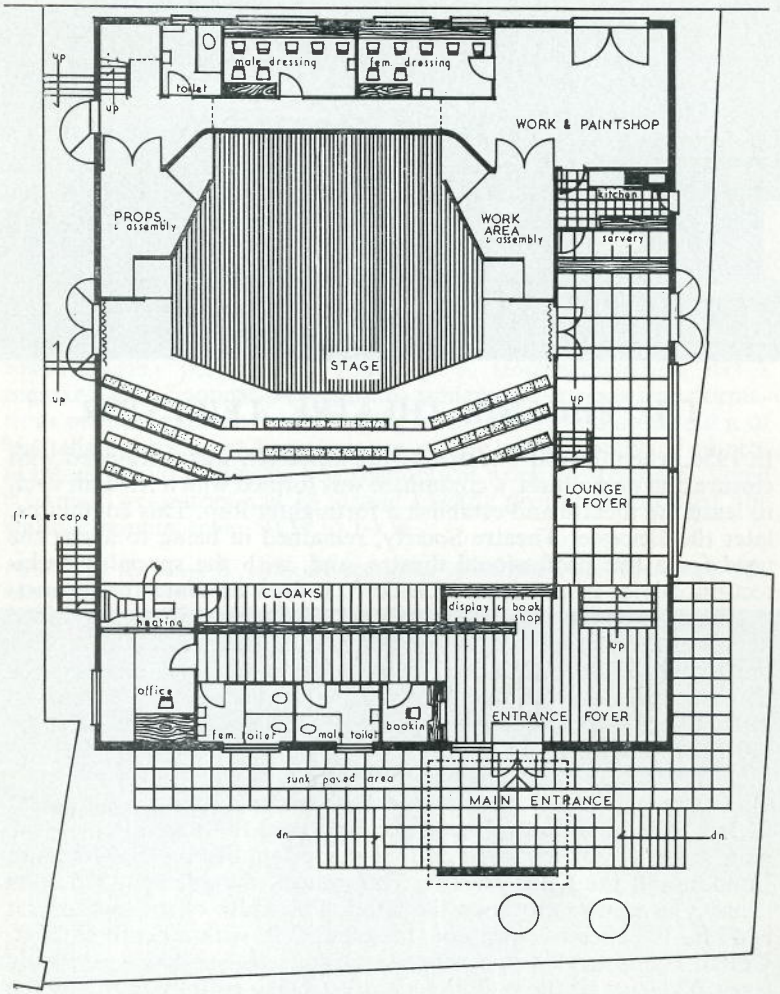
THE PHOENIX THEATRE, LEICESTER

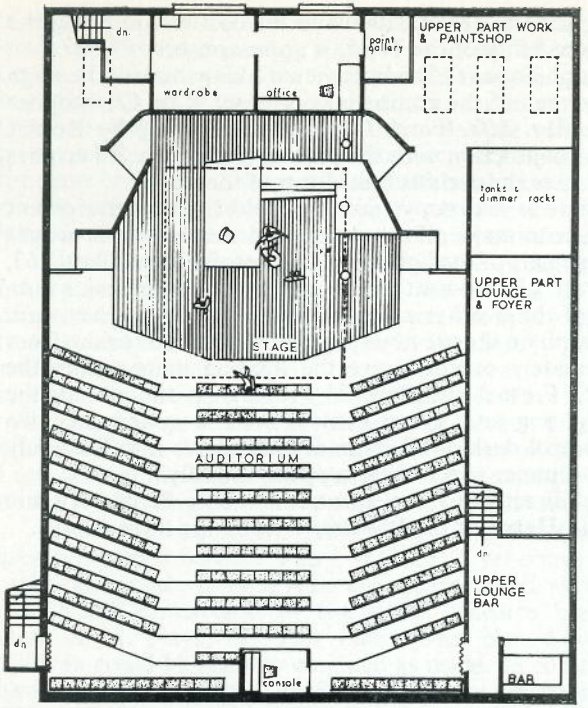
In 1956, when the old Theatre Royal, Leicester, was threatened with closure and demolition, a committee was formed which tried, in vain, to lease the theatre and establish a fortnightly Rep. This committee, later the Leicester Theatre Society, remained in being to assert the need for a live professional theatre, and, with the specialist architectural advice from Richard Leacroft, it drew up plans for converting likely premises. The September 1959 issue of TABS contained details of these proposals, but no premises became available. In 1961 the Living Theatre Company came to Leicester and renewed the City's taste for professional drama. The Corporation then decided to build a theatre to be administered by an independent Trust set up by the Theatre Society.

This theatre was designed by the City of Leicester Architect's Department, Stephen George and his assistant, Richard Bryant, to fit in a standard steel frame of the type used for warehouses. The plan is somewhat the same as that made familiar by the Mermaid, London and the Civic Theatre, Hampstead, though with 275 seats it has a larger capacity than the latter. The width of the auditorium is 47 ft., the effective width of the stage 32 ft. with a depth of 27 ft. Unlike Hampstead it does not use house tabs but has a revolving stage. The cost of the building, which is being entirely borne by the

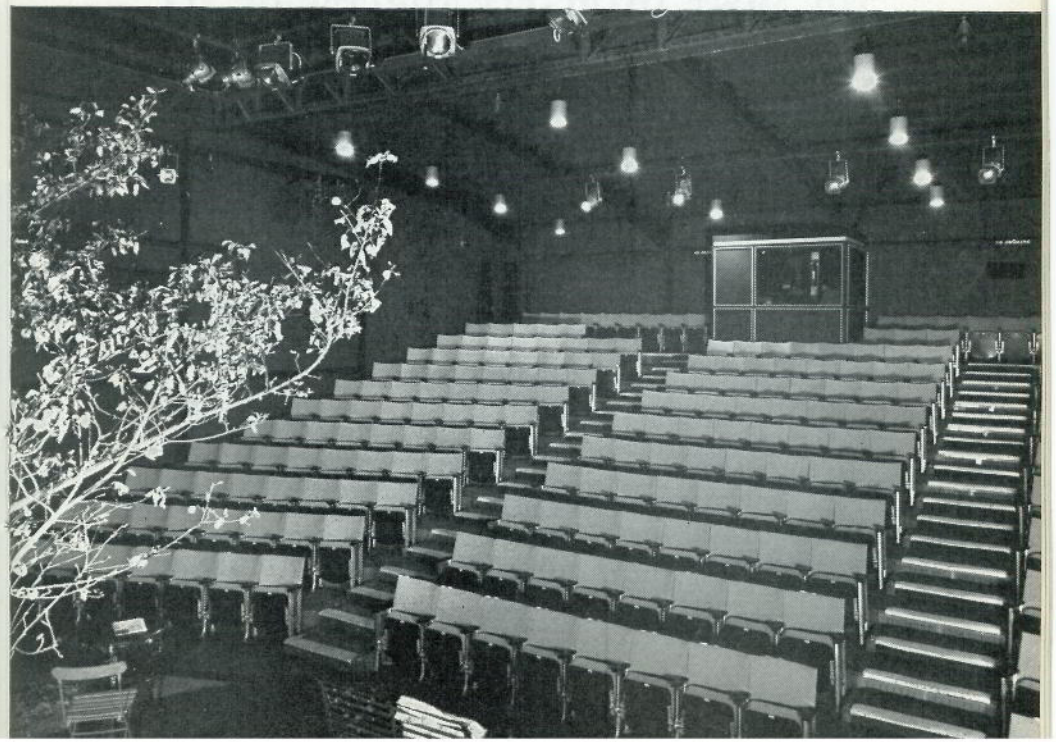


Phoenix Theatre—section and lower ground floor and ground floor plan.





Phoenix Theatre—first floor plan.



Corporation is approximately £22,000 and the cost of equipping the interior, the responsibility of the Trust, is approximately £7,500.

The photograph on page 15 shows a view looking towards the stage from the extreme rear of the auditorium. The set is by Christopher Morley and the play, *Life Worth Living*, is a new one by Robert Storey. Taken in conjunction with the plan of the theatre it becomes clear how the set uses the architectural form of the stage.

Overhead there is a canopy frame to hold lighting equipment and provide a place to make off any suspended scenery. As is proper to this form a large part of the lighting is from profile spots (Patt. 263, 1,000-watt and Patt. 23, 500-watt) in the auditorium. Particular note should be made of the two horizontal lighting bars on the side wall.

The photograph on the previous page shows the auditorium from the stage. Immediately overhead are the lighting units within the canopy (Patt. 223 Fresnel and Patt. 23 Profile). At the rear of the seating is the lighting and sound control box. A system LC two preset remote control desk of 72 dimmer channels is installed, only two of the three dimmer racks being supplied initially.

The artistic director to the theatre is Clive Perry. We are indebted to David Harris of the Phoenix Theatre for these details.

THE MOST ADAPTABLE THEATRE OF ALL

by Frederick Bentham

Three years ago a conference was held in London by the A.B.T.T., and a rather fine bound volume of the proceedings was issued. Long ago we heard of the plans for the Questors adaptable theatre and this theatre will open early next year. Meantime others more fortunate financially have stolen a march on the Questors and several such theatres are now in use even in Britian, where indeed a degree of adaptability has to be claimed for any form of theatre built today, though such claims may be based on very slender foundations. Hearing Dick Hurran, the producer for Cruickshank, excitedly bubbling-over at what he had achieved in the Alhambra, Glasgow, set me off on the following train of thought.

The answer to the question " What is the most adaptable theatre of all? " is quite simple—it is " the proscenium theatre "! This does not mean that I am claiming no other forms should be built in future, but I do claim that of all the theatres so far built the dear old-fashioned proscenium *appears to its audience* as the most adaptable. If after providing examples we consider why they were successful we can then make some deductions that will be useful

in our future work, whatever the theatre we are making. This will be much better than beginning with, so to speak, a blank sheet of paper on the drawing board. There is nothing so beguiling as drawing plans but this is an art in itself and I often think architects should paste up large warnings on the walls of their drawing offices: " If it looks good on the drawing board it will never work in practice ", and add the same comment in respect of architectural models. Much the same as the engineer's maxim: " No result derived from theory or laboratory measurements works when it is put into practice ".

Both the plans and the models have potentially an intrinsic beauty and rightness of their own and in this lies the trap. The proper way to begin is to choose the nearest approach, already built, to what one is trying to do and sit in it mentally conjuring up this and removing that and lo! the feel of the existing theatre will be replaced by the feel of your new theatre. This is probably only telling architects what they already know but I must say it here otherwise some reader will immediately jump to the conclusion that I am demanding exact reproduction of my examples herein instead of merely offering them as springboards for the imagination.

Let us return to the Alhambra, Glasgow. Could there be a greater contrast between Fig. 1 and Fig. 2, yet conversion one to the other takes place twice a year. On the one hand we have what most people still understand by the word " theatre ", curtain and all. Here ballet, plays, *My Fair Lady*, *West Side Story*, Gilbert and Sullivan could be suitably confined as usual. In contrast, in Fig. 2 we have an open layout *The Starlight Room* as sophisticated or as "Blackpool" as we like, it is only a matter of detailing in the décor.

Closer examination of these two amazingly different photographs will show that the change relies only slightly on actual physical adaptability (the moving of chunks of building about) and is rather an optical illusion stimulated by clever décor and relatively minor changes. Under Brechtian stimulus the theatre seems to have clean forgotten the potency of *optical illusion*. Things are never what they are in the theatre but what they seem. It is here that the true potency of lighting and décor is to be found. One reason for the great adaptability of the proscenium theatre and the poor adaptability of other forms is that the opportunities to use lighting and décor both positively and negatively are so much greater in the former. It is interesting to see how little the audience is aware in Fig. 2 of the handicap of the rigid physical structure of the proscenium arch, fire curtain and all. That is, assuming, of course, that an audience is the reason for a theatre. This has been questioned I believe.*

Going back in history some of us will remember the extra-ordinary effect of a visit to the London Coliseum in 1931. Even before the curtain rose, as far as the view normally encompassed from our seats was concerned, this was not a theatre but the Austrian

* *See* TABS, *Vol.* 21, *No.* 2. " *What is a theatre for?* "

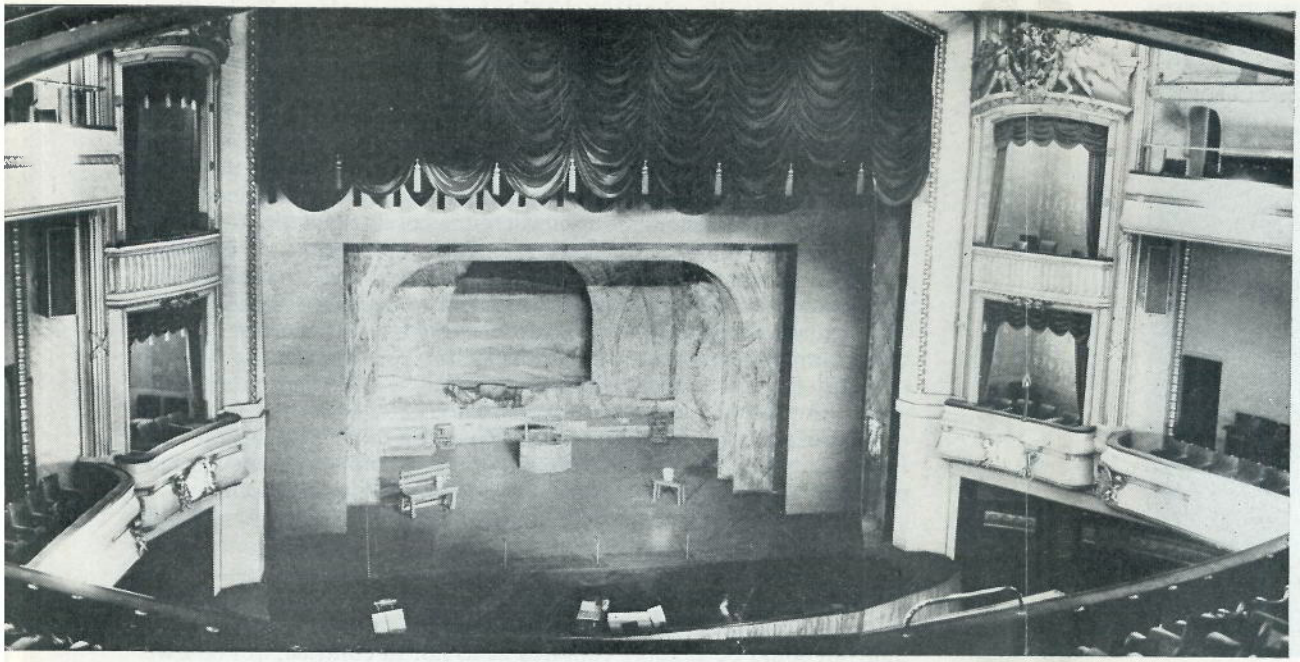


Fig. 1. *Alhambra, Glasgow, as itself.* (*Photo Scottish Daily Express.*)

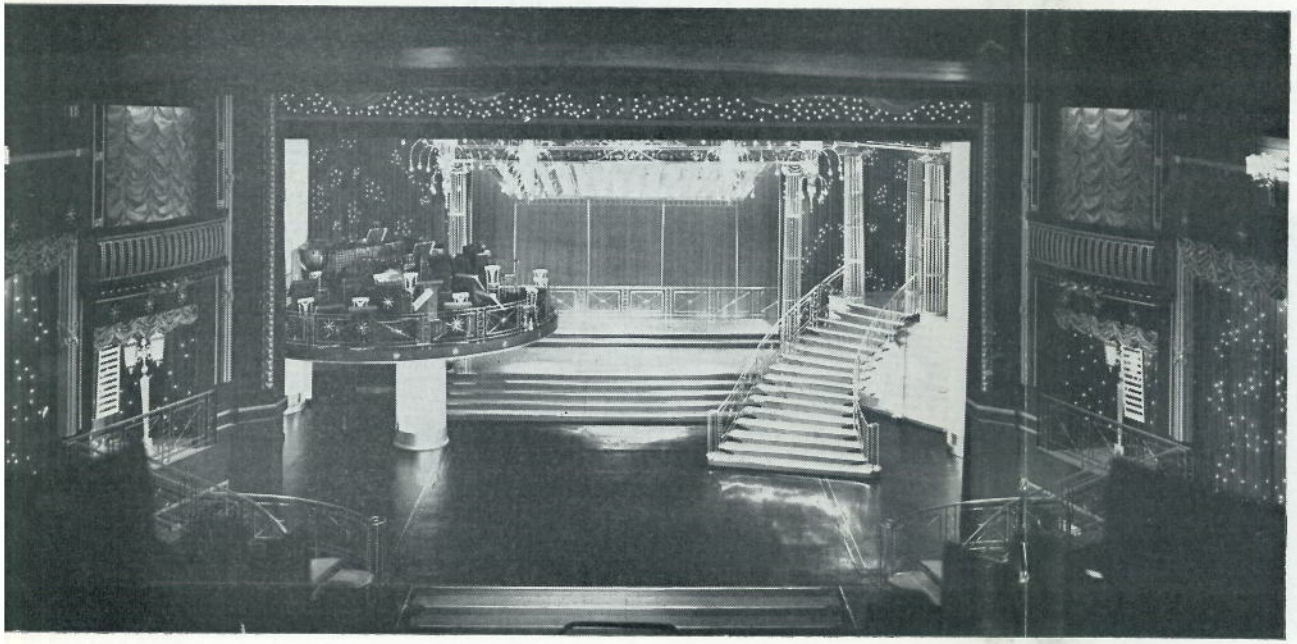


Fig. 2. *Alhambra, Glasgow, as the Starlight Room.* (*Photo Scotsman Publications.*)

Tyrol. The photographs of Erik Charell's original Coliseum production of *White Horse Inn* (Figs. 3 and 4) give some idea of the effect achieved, although, being taken-with-flash, the way the décor was aided by lighting does not come over. Where there was no décor the theatre was dark.

The Coliseum proscenium is very wide (55 ft.) and the theatre boxes were completely covered with scenery. Cinerama in 1931, but with live theatre! The joins between the three pictures, left, centre and right, as represented by the proscenium edges in fact were far less noticeable than the joins of the three projector Cinerama system. The décor was by Ernst Stern and although house tabs were used they formed part of the auditorium décor and the illusion was not lost. There were in fact many scene-changes on the stage, the revolve being used for the purpose both invisibly and in the finale revolving in full view backed by the complete cyclorama.

Front-of-house spotlighting wasused and some of it is shown hanging in Fig. 3.

Before the extension of décor to the sides of the auditorium is dismissed as something for wealthy theatres only, it is worthwhile remarking that the Questors, for example, have staged several productions in this way with scenery at each end of the apron stage forming a visual extension of the stage décor within the confines of the proscenium. Tabs were used to cover scene changes between acts and the apron scenery carefully designed for each production so that although it could not be changed it was appropriate.

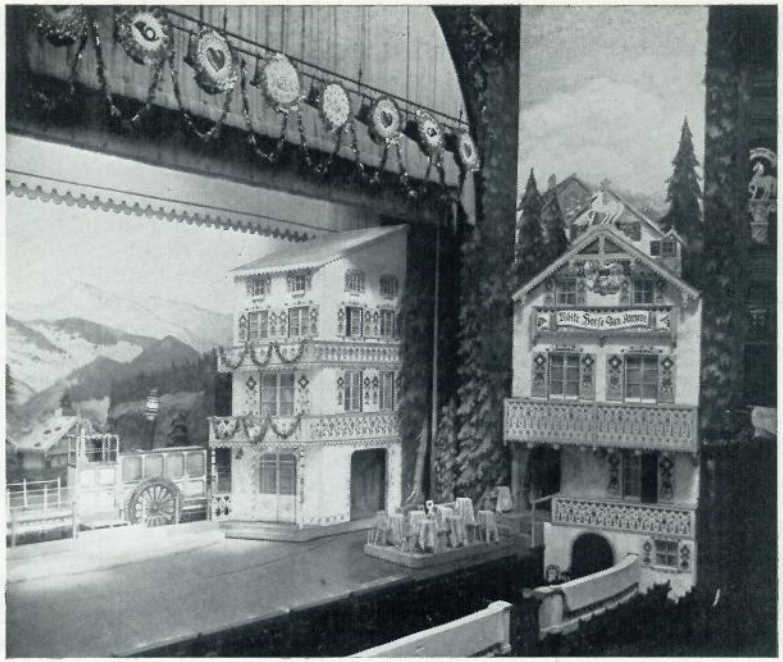
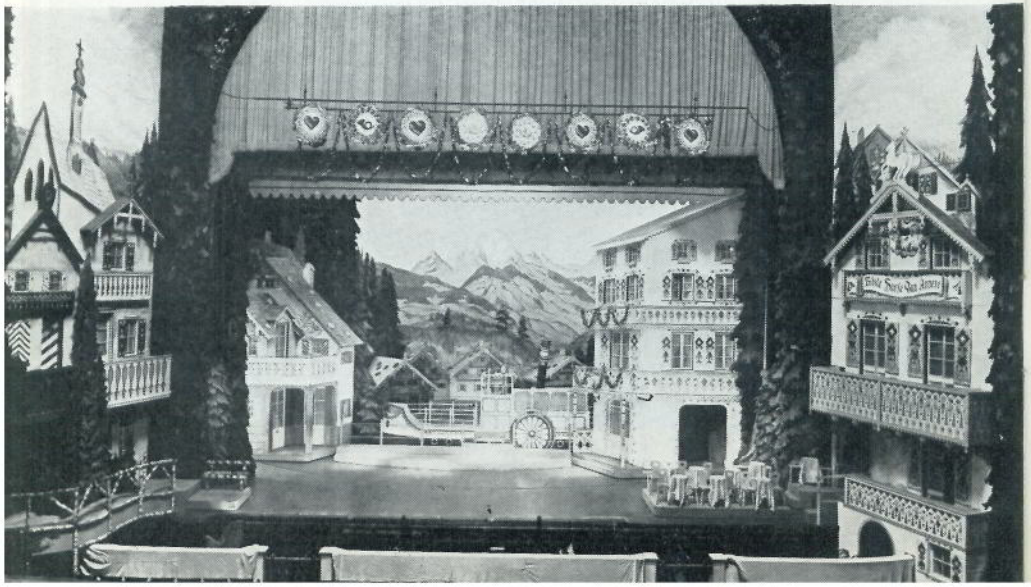


Fig. 3. " *The Whitehorse Inn* " *at the London Coliseum* 1931. *Showing décor over stage boxes.*

Fig. 4. *An early form of Cinerama?—Coliseum* 1931.



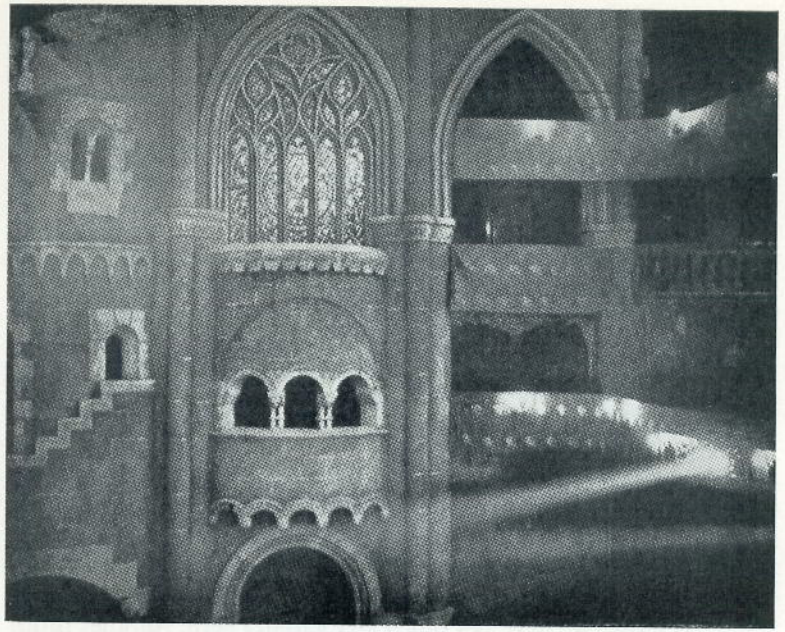


Fig. 5. *Cathedral décor covering stage boxes for the* " *Miracle* " *at the Lyceum, London,* 1932.

Another famous production of the early 'thirties was *The Miracle* and it was extraordinary how the Lyceum Theatre, London, became its normal self within days of the termination of the run. C. B. Cochran had, of course, presented Reinhardt's production of *The Miracle*, open arena fashion, at Olympia in 1911, but as the present writer was born that year he has to rely on colourful eye-witness accounts from his parents and their contemporaries. Altogether, although there was no Strand Electric, it seems to have been a memorable experience in which the lighting, presumably mainly from arcs, played a large part. The 1932 production at the Lyceum I can vouch for personally. The photograph (Fig. 5) shows the stage décor covering boxes but it did not form a facsimile cathedral. There was no attempt to balance left and right sides of the auditorium for example, as if the altar and East End was slap in the middle of the stage. An impression of appropriate background was given, it being realised that we seldom try to take in a picture at one glance like a single picture on a camera with a wide angle lens. Many, many optical messages go back to the brain for collation, and if we can trick the computer therein we get an optical illusion. This, plus imagination, which in most brains (mine, anyway), refuses to be tethered to physical fact for more than seconds at a time, does the rest.

This production was the first one I remember in which there were comings and goings onto the stage via the steps into the orchestra pit, or where it usually is, which has become such a mania in recent years. The orchestra was placed in the gallery which was closed to the public.

Here are but three examples of adaptability in a proscenium theatre, an adaptability which can appear to remove a solid proscenium while it in fact still stands there. There are many other examples but seldom from the serious theatre. Producers there are too obsessed with Brecht to *stoop* to visual illusion. Perhaps if they did we should not have to get involved in all the mechanical complications which adaptable theatre, except on the smallest scale, will involve.

Let us in contrast consider other forms of theatre; how adaptable can they be? The first thing one finds is that no form of theatre which does not possess a permanent proscenium complete with grid can claim to be adaptable *to that form.* Any such adaptations are token only and are minus the essential scenery facilities which are the reason for picture-frame theatre. Another likely objection will be that the seats will be facing the wrong way. In forms of theatre where Arena or In-the-Round is one of the targets, fixed seating is hostile to Proscenium or End staging because the bulk of the audience is angled to orientate to the arena and to the rest beyond on the other side. All are looking in the wrong direction. Thus, unless the seats and their steppings move, we have not much adaptability here. Another form, as at LAMDA, puts the bulk of the audience facing the end stage direction but surely this reduces arena and in-the-round forms to token only. Also if any real seating capacity were required we should be deprived of the intimacy which is given as the best reason for these forms. One could in fact, as in the deepest seating block at the late Pembroke, Croydon, find oneself a long way from the stage for all that it was theatre-in-the-round.

There remains the moving of the seating blocks as with the rostrums at St. Mary's* or the mechanical arrangements at the Loeb Center, Harvard, and subsequent schemes. Unless the units are many but small this is useless. The bulk of the Loeb seats were fixed and what did move was in such big inflexible chunks that the result for a million dollars was about as adaptable as a pair of old-fashioned whalebone corsets. What we need is the flexibility of a modern pair of stretch-briefs but even there we have to have made up our minds which way we want to enter the thing and how many legs we have. True adaptability can only exist within the technique of staging productions. Within the rigid physical frame of a particular theatre form, an illusion of amazing changes can be presented as my proscenium examples show but let's have no more talk of adaptability in the sense of changing one form for another. This cannot be done properly for a million dollars or a million pounds either.

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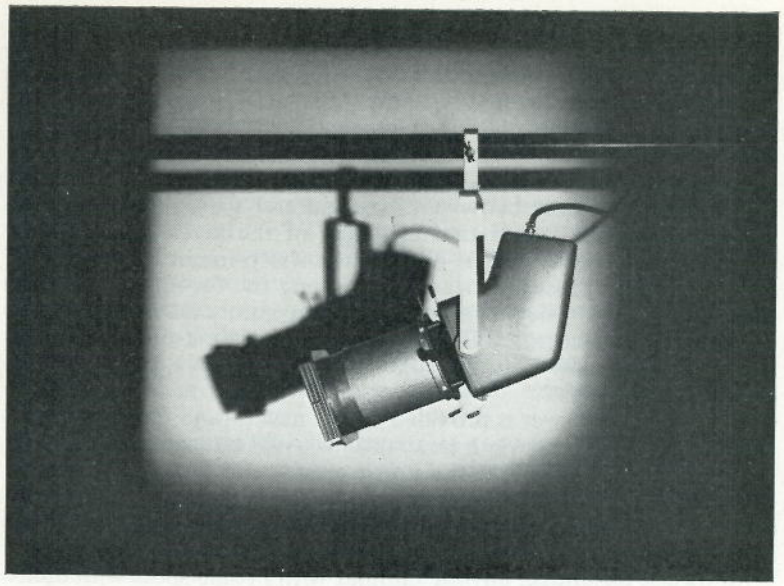


A NEW SPOTLIGHT

Usually this means a new shape, a new wattage or something of that sort, but in this case the new lantern looks externally almost exactly the same as the Patt. 263 introduced only a few months ago. Yet the new lantern, the Patt. 264 (Patent applied for) provides an entirely new lighting facility.

If we exclude variations of size and wattage and try to describe the characteristics of stage spotlights by their results then there have been until now only two important types. The first consists of a lens behind which a lamp is moved to and fro. This lens throws an enlarged image of the lamp filament and steps are taken to ensure that the filament is never focused sharply as the resulting image would be unpleasant. The beam from these lens spots can be expanded and contracted but it cannot be shaped, although barndoor flaps are sometimes fitted to prevent light scatter in a particular direction. A big advance for these is the use of the Fresnel step lenses in place of simple Plano lenses. The light from these can be brighter and more even with soft-edges to the beam. These lenses are, incidentally, cheaper than their optically worked plano predecessors.

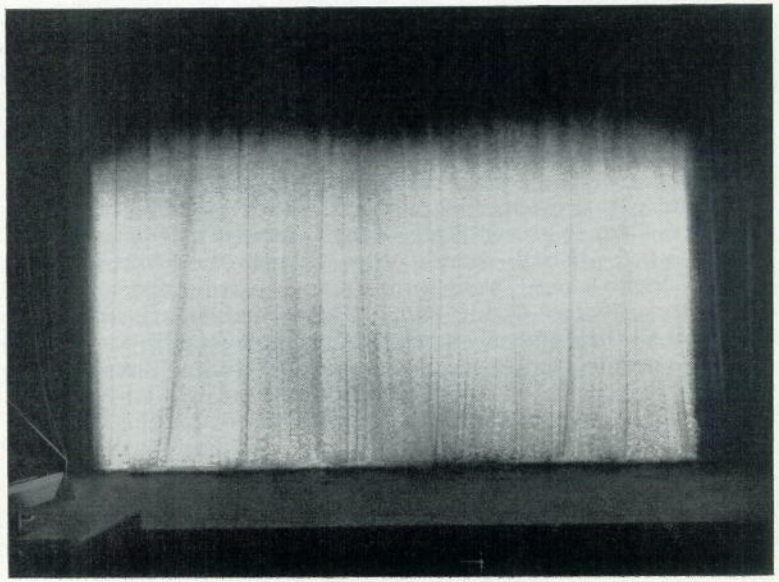
The second type of spotlight consists of a reflector, often but not necessarily ellipsoidal in shape, which collects the light and passes it through a gate. It is the edges of whatever is inserted in this gate that are focused by the lens out in front. An iris could be put in the gate

but the most convenient arrangement is four separate shutters each adjustable by means of external knobs which one can angle and/or insert to cut off the beam to the extent required.

So far so good; the first type, the " Fresnel ", gives us adjustable circular soft-edged beams, and the second the " Profile ", gives hard-edged beams adjustable in shape. It is obvious that these hard well defined edges to the beam can often be a nuisance and this is corrected by defocusing slightly or by putting a diffuser glass in front of the lens. The trouble here is that all edges of the beam are softened together. Suppose two edges ought to be sharp to cut exactly along one side of the proscenium arch and along the footlight while the other two ought to be soft to merge imperceptibly into the patterns of light from other spots? Or what about a sharp cut-off clear of the spectators with soft on-stage edges for theatre-in-the-round? How do you achieve this?

An instant answer is provided by the new Strand Patt. 264. Any or all edges of the beam can be shaped as usual but can each be hard or soft focused, at will, at the touch of an extra knob. The gate is provided with two sets of shutter knobs. The beam is shaped exactly and hard focused using the black knobs, then wherever a soft edge is required a second corresponding knob coloured red is used. There is no special technique, anyone familiar with Profile spots with built-in shutters like the Patt. 23/S or Patt. 263 will be at home with the new lantern. At first this spotlight will only be available in the 1,000-watt size, but it is intended to develop other models in due course.

Here is a rare event to celebrate our Jubilee, a brand new instrument for the lighting artist. For the moment until we can think of a better name it is intended to call it the "Jubilee Spot" Patt. 264 and it has been introduced just in time to take part in the Strand Electric 1964 celebrations.



THE ST. DAVID'S THEATRE, CARDIFF

by Elidir L. W. Davies, F.R.I.B.A.

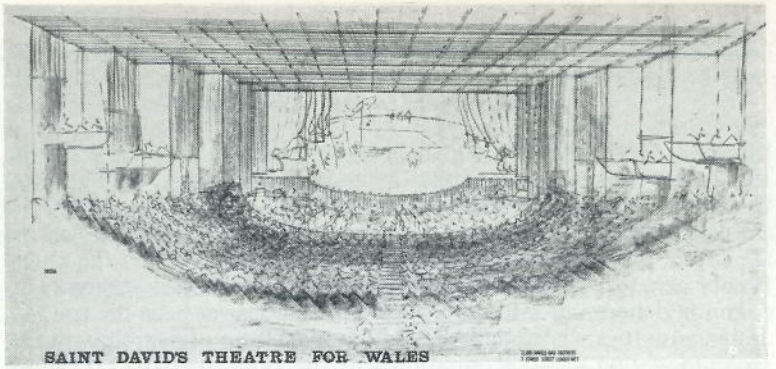
I first produced a scheme for the new National Theatre for Wales in 1961 when it was envisaged that a site in Cardiff Park, facing on to Queen Street, would be available. The present site of three acres, on the west side of Castle Grounds and bounded by the Castle Mews on the south, the line of the New North Road to the east and the Dock Feeder canal to the west, necessitated a completely new design. The common denominator in both schemes has however been the need to design a multi-purpose building, with a maximum of flexibility in the accommodation which it could provide for its various uses. I had to devise a fitting home for the Welsh National Theatre and at the same time provide adequate facilities for large visiting international companies.

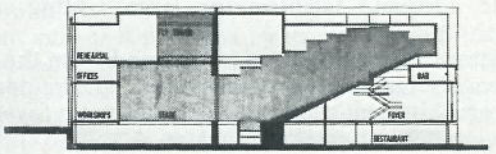
The theatre is approached by a ring road from the New North Road. Passengers may be set down under cover under the main foyer, and from this point stairs lead up to the main foyer area where patrons arriving on foot enter the theatre. Access to the auditorium is either direct from the foyer or by bridges and stairs from the bar at a higher level.

The whole conception of the building has been based on the relationship between the stage and the auditorium and it has been designed, as it were, from the stage outwards. The stage itself is situated in the centre of a concrete drum 100 ft. in diameter and 65 ft. high. Into this circular area penetrates the fan-shaped wedge of the auditorium—a single steeply-raked entity which will both provide a strong feeling of unity for the audience and also give good acoustic conditions and sight lines. The auditorium can be adapted in size and form according to the purpose for which the building is to be used. In no case, however, will there be any barrier or lines of demarcation between actor and audience, thus preserving, even with large-scale performance audiences, a sense of intimacy between the two. This flexibility is made possible by movable panels on bridges suspended from the roof, which can be raised or lowered to give the size of auditorium required; the resultant change in the volume of hard surfaces will also provide an automatic adjustment in sound reflection and ensure the correct balance of acoustics for both opera and drama. There are also six movable parts in the floor of the stage area which likewise can be raised or lowered to give additional forestage area, audience seating, or an orchestra pit.

Five main uses are envisaged for the theatre: (*i*) opera, (*ii*) drama requiring a proscenium stage, (*iii*) drama on an arena stage with or without apron, (*iv*) music, and (*v*) conferences.

For the production of opera, it is possible to have a proscenium opening varying from 46 ft. to 64 ft. wide and 24 ft. high, with a forestage 12 ft. deep, and an orchestra pit for 100 players. The auditorium in this case can seat 1,444 persons (Fig. 1).





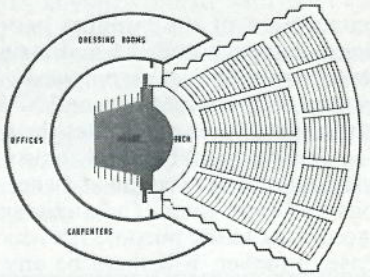
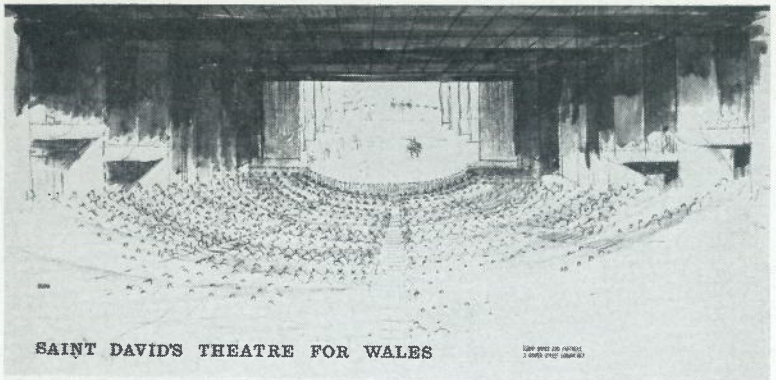


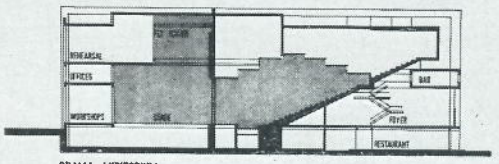
Fig. 1

For " proscenium drama " the arrangement will be similar to that for opera. The absence of the orchestra will however permit the seating capacity to be increased to 904 or 1,504 (Fig. 2).

Where a panoramic arena stage is required there will be an acting area 85 ft. deep by 100 ft. wide, and where an apron stage is called for, this can be achieved with a proscenium opening 46 ft. wide and 24 ft. high and an apron 46 ft. wide by 26 ft. deep. In the latter case a small orchestra can be accommodated at the side. Both of these arrangements afford a seating capacity of 844 or 1,444 seats.

By the introduction of additional seating at the rear of a completely circular stage, accommodation for conferences can be increased to 2,000. This form can also be used for choral performances and recitals (Fig. 3).





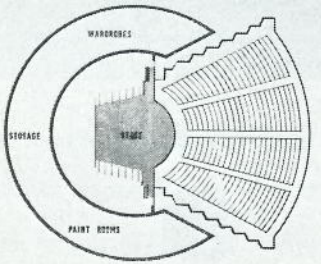


Fig. 2

The grid, 65 ft. above stage, is 32 ft. from front to back and 85 ft. wide.

The stage is surrounded by four storeys housing all backstage facilities: rehearsal rooms, dressing rooms, wardrobe rooms, make-up, wigs, workrooms, dark rooms, paint frames, electricians' rooms, carpenters' shops, and offices. At roof level is a garden for members of the company.

An area of 2,496 sq. ft. is allocated to rehearsal rooms, one large and two small.

Dressing room space is generous: a total area of 3,876 sq. ft. to accommodate 102 actors. There are eight single rooms 12 ft. × 10 ft.,

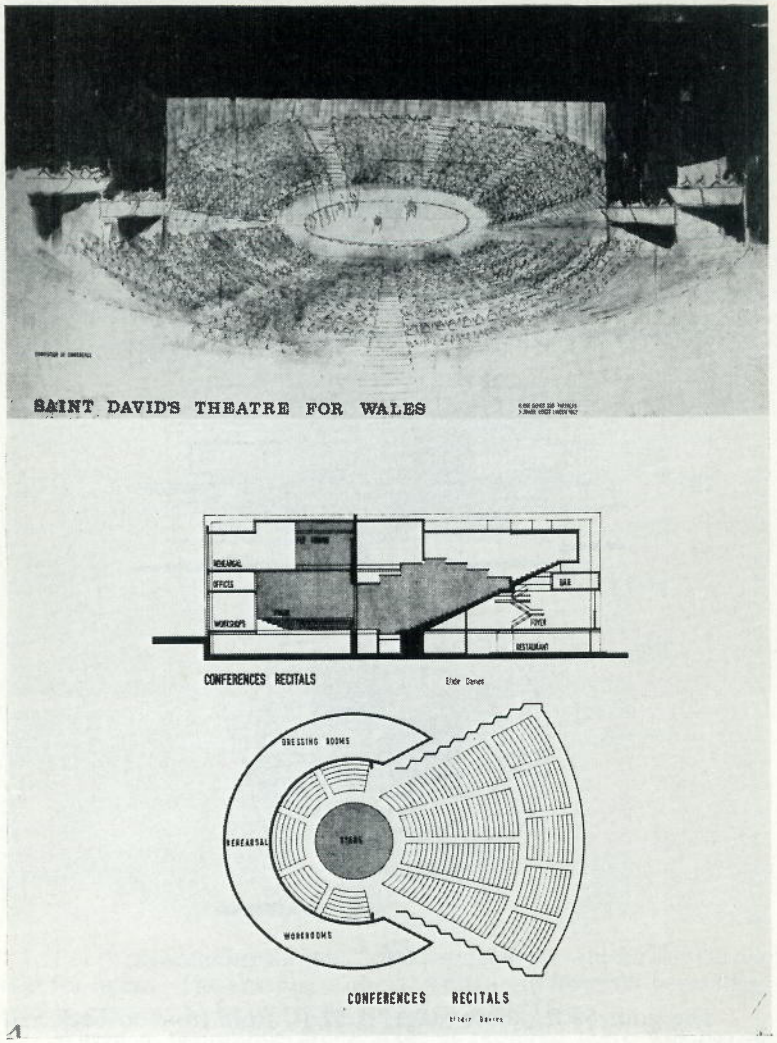
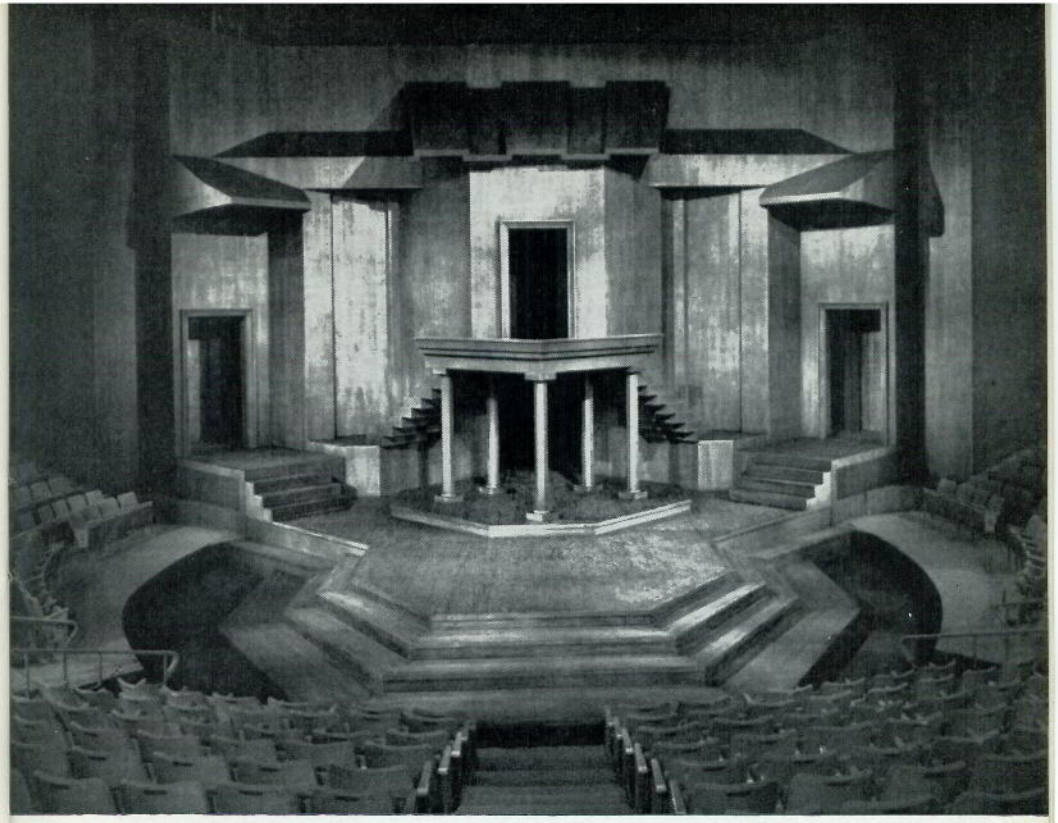


Fig. 3

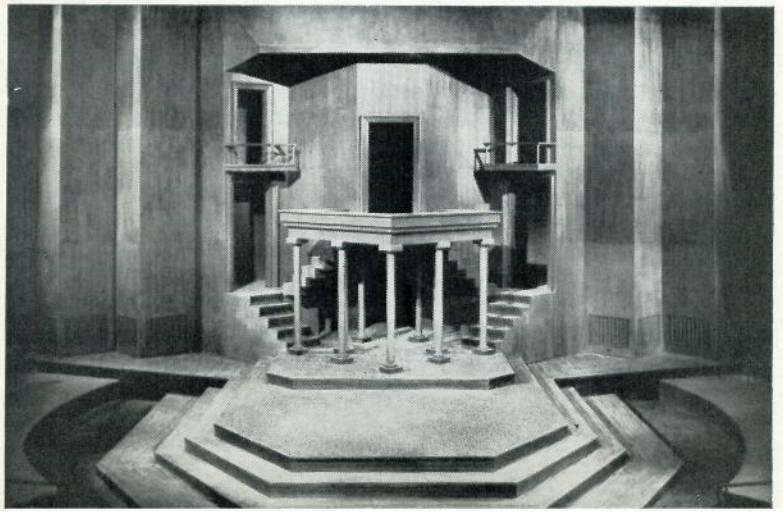
seven 18 ft. × 10 ft. (to take six actors each), four 18 ft. × 16 ft. (nine each), and a larger room, 18 ft. × 28 ft., for a further 16. For members of the orchestra separate cloakrooms and rest rooms are provided.

It is intended that the theatre, with its bars, restaurant, foyers, galleries, and display areas—all with magnificent views over the Park and river—should serve as a general cultural centre.



New Stage for Stratford Festival Theatre, Ontario, 1963

Re-designed by Tanya Moiseiwitsch in association with Brian Jackson. Comparison with the old stage below shows the new one to be wider and more dramatic, whilst still retaining the basic principle of close audience-actor relationship.



TYRONE GUTHRIE THEATRE, MINNEAPOLIS

by Percy Corry

The opening on May 7th, 1963, of the Tyrone Guthrie Theatre, established Minneapolis as a significant spot on the theatrical map of America. This theatre has been international theatrical news for at least two years. As is well known, it follows the pattern established by Tyrone Guthrie first in Stratford, Ontario and followed later in Chichester, England; but while the latter are theatres intended primarily for tourists during a limited summer season, Minneapolis (which includes its twin city—St. Paul) intends to provide entertainment for a large urban and industrial area. There is also a university population of some 28,000 people.

This theatre has resulted from a desire to establish a company able to present a high standard of classical production away from the commercialism of Broadway, in some city which was large enough and eager enough to support such a company. The idea originated in 1959 with Oliver Rea and Peter Zeisler, both of New York. They

were enthusiastically joined in the quest by Tyrone Guthrie, and after much negotiation and consideration of alternative cities, it was decided to accept the invitation from Minneapolis to establish their company in that city. It had the right kind of cultural activity to induce optimism: numerous art galleries and museums, the second largest university in the U.S.A. and an orchestra with an international reputation: it also claims to have major football and baseball teams, but how far that fact may be assumed to enhance the qualifications of Minneapolis for classic drama is problematic. The invitation to consider Minneapolis originated, appropriately enough, with the director of the University Theatre, Frank Whiting. The Walker Art Foundation donated four hundred thousand dollars and a plot of land on which to build a new theatre. From the community generally the sponsors raised a total of over two million dollars. Two non-profit organisations were formed—the Tyrone Guthrie Foundation to own and administer the theatre and the Minnesota Theatre Company Foundation to present the performances. The stated object is to present classic drama of all periods in repertory, to provide entertainment for the maximum number of people, and at the same time to give a real stimulus to a company of first-class actors.

With the influence of Tyrone Guthrie it was certain that the new theatre would be in accordance with his well-known convictions and should be of the form he created at Stratford, Ontario, with the aid of Tanya Moiseiwitsch, again in collaboration with him at Minneapolis. The original intention, however, was to make the theatre adaptable to proscenium productions when required. A fly-tower was to be provided and seating was to be partially removable on lifts. It was found that the cost of this adaptability (another half-million dollars) was too great to be undertaken and finally a permanent arena theatre has been created, designed by Ralph Rapson, head of the Department of Architecture at the University of Minnesota.

The auditorium appears at first sight to be semi-circular. In fact, the 1,437 seats are distributed through 200 degrees around a five-sided stage and no section of the seating constitutes an exact segment of a circle. On the actor's left side the seats are arranged on a continuous slope, but the remaining three-quarters of the seats are distributed between the " orchestra " and a cantilevered balcony with a broken front so that groups of seats are, in effect, in large boxes. No seat is more than 52 ft. from the centre of the stage. Although the walls of the theatre are dark grey, there is no sense of gloom as the seats add a touch of gaiety by their generous variety of colours—orange, violet, greens, blues and yellow. The stage is 2 ft. 8 in. high and is raised from floor level in three steps. The first row of seats is raised 8 in. from floor level. The stage at playing level is 30 ft. by 35 ft.—very satisfyingly proportionate to the auditorium. The two-storied permanent setting on the back wall is, in fact, constructed of two mobile sections, which roll away to

The Kliegl Lighting Control front of house with view of stage beyond; 60 dimmer channels, 3 presets. Push buttons on the vertical panel above the dimmer levers are for setting up groups within the presets.

allow trucks with changes of furniture and props to be pushed on-stage between acts. This is a practical improvement of design by comparison with either Stratford, Ontario or Chichester. The former has a fixed background, now slightly modified, and the latter has a background which, although it can be dismantled, is of heavy construction and changes have taken place only between plays.

Acoustic panels (referred to as " clouds ") are irregularly spaced and inclined over the auditorium and ten main lighting portals with an additional one for special effects, are distributed over the ceiling area. There is excellent access to all the lanterns by means of cat-walks over the ceiling clouds. The lighting control and the patch panel are accessible from the cat-walks. The control is a Kliegl S.C.R. unit with two pre-sets, having facility for sixty control channels, but having only thirty-six installed initially. There are 160 circuit jacks, each control channel (capacity 6 KW) having four sockets. During this first season about 100 lanterns were being used. For the general lighting of the stage four lanterns are directed to each of a number of areas, each area being, therefore, lit from four different directions, an essential requirement for this form of theatre. There was not any observable spill or discomfort to the occupants of the front rows. The fact that the front rows are raised above floor level is an obvious advantage in this respect.

The lighting and sound controls are in F.O.H. positions: the stage manager has a portable control unit which may be operated from several points. At the back of the stage there is a musicians' gallery **from** which the musicians are not visible to the audience.

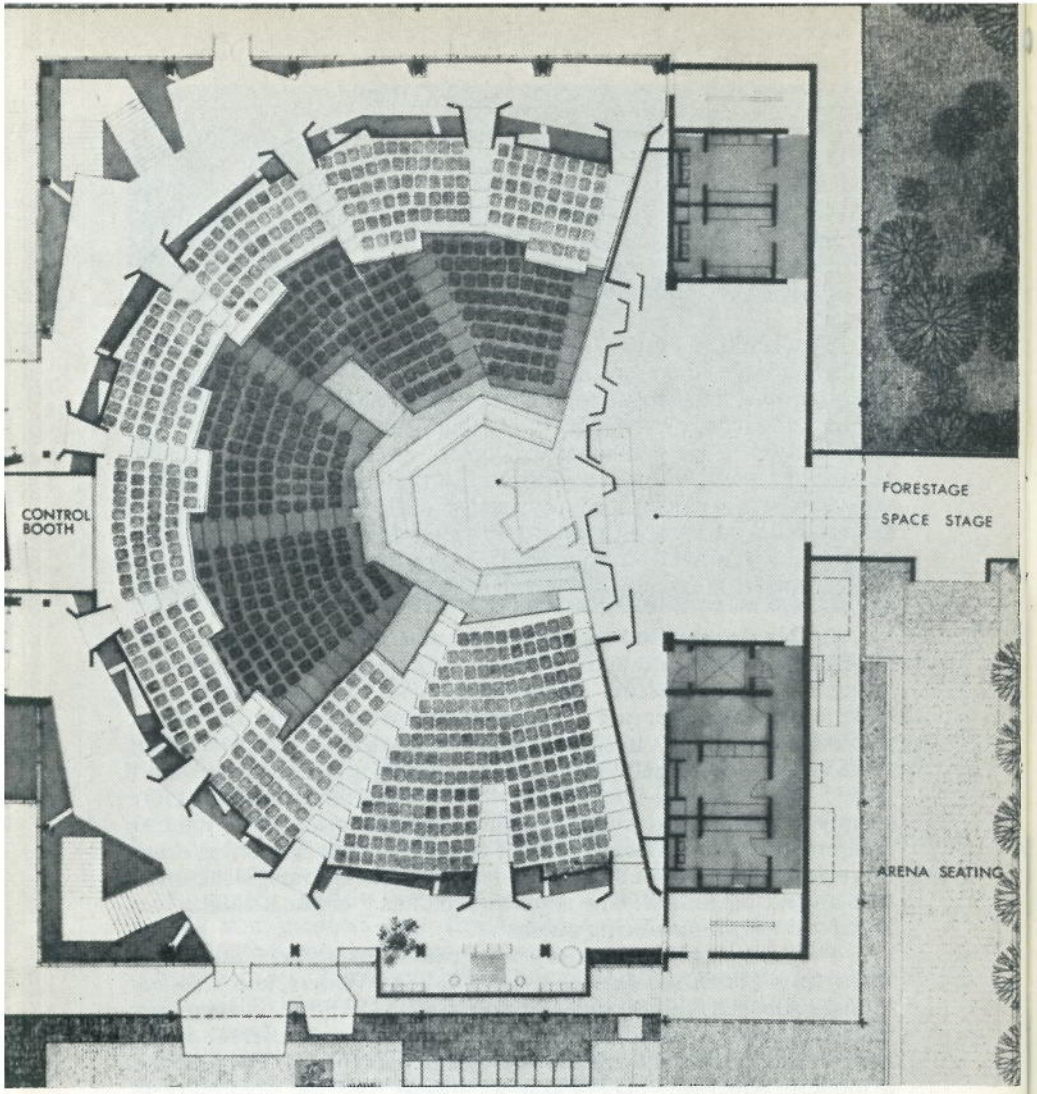
The backstage area is excellently spacious. There are five working floors, served by a lift. Rehearsal rooms are of the same size and shape as the theatre's stage. A large Green Room has kitchen attached. The scenery and costume workshops are excellent. There are generous dressing rooms with showers. Office accommodation overflows into an annexe. There has obviously been no lack of expert advice and there has, quite clearly, been a willingness to act on such advice.

The exterior of the theatre is boldly imaginative and quite understandably, therefore, controversial. The architect himself says, " I have attempted to provide an exciting and provocative exterior character which anticipates the delight and stimulation of the theatre itself ". He has succeeded in doing so. The building has a rectangular plan, with the auditorium centrally placed, and spacious corridors at the sides. The glass walls, with outer abstract frames, provide the interior with unattractive brightness in daylight and, at night, cylindrical aluminium fixtures and glass balls light the lobby, staircases and corridors with striking effect when viewed from outdoors.

Architecturally and technically the theatre is a significant one: it belongs to its period and its purpose. Of course it cost more than either of its predecessors of the same type: not surprisingly it is superior to Chichester and is an improvement on Stratford, Ontario. The seating capacity is slightly more than that of Chichester but there is a greater sense of intimacy. The acting area is better proportioned and the sight-lines are better because the seating is more steeply tiered and the stage is higher. The disposal of the lighting equipment is more effective than at Stratford, Ontario, and is much more accessible. The ability to roll aside the background structure is also a great advantage. The acoustic " clouds " create a ceiling that is interesting without being obtrusive.

The first season's repertory is: *Hamlet* (in modern dress), *The Miser* (in a *Commedia del arte* style), *The Three Sisters*, and *Death of a Salesman*. Of this choice Guthrie says, " Three of them are generally acknowledged masterpieces in three very different styles, the product of different cultures and of different epochs. The fourth is a modern American play which we believe has the possibility of eventually being a classic." I saw only the first two.

Hamlet was a disappointment. The modernity was quite readily accepted, and it was not the gents' natty suitings and shorty coats that made the Prince and Horatio less than satisfying. The performances lacked the classic stature. One applauded the impressive scarlet and gold uniforms of the heel-clicking guardsmen, but winced a little when their entrances and exits betrayed the lack of a sergeant-major's vocal encouragement. The ghost was so disposed as to emphasise his too, too solid presence. Despite expert acting and direction the performance neither gained nor lost anything by the theatre form, but was not to be included in the best of the Hamlets one has seen.



Composite plan of Tyrone Guthrie Theatre. Light areas of seating are at balcony level except where they are shown as a block extending forward to the edge of the ***stage. This block of seats takes the form of a continuous terrace, the*** *remainder being normal balcony with stepped stalls (shown as dark seating) extending beneath. This combination of balcony, stalls and terrace provides the "asymmetric" auditorium referred to in the text. The acting area and back stage areas are shown at stage level.*

On the contrary, *The Miser* was superb in every way and gained appreciably from the theatre's form. Hume Cronyn's performance as Harpagnon and Douglas Campbell's production were a delight by any standard.

The asymmetrical auditorium has had some publicity and an attempt was made to test its purpose. Other playgoers were persuaded to swap seats during intervals. Several parts of the house were tried, including the summit of the continuous slope. In all positions, the sight lines were good. There were inevitable differences of proximity and viewing angle. As is usual in my experience of arena and central acting areas, there is an obvious creation of an acting "front" and those members of the audience opposite receive most attention. One was not conscious of any advantage or disadvantage in the asymmetry of Minneapolis by comparison with Stratford's symmetry, which had been observed during performance a few days previously. If the semi-circular auditorium should now become unfashionable there could, perhaps, be advantages in trying an emphatic semi-ellipse to meet the actors' frontal attack.

It is apparently inevitable in this form and size of theatre that some of the speeches of some of the actors on some parts of the stage are bound to be lost to some of the audience. This has happened at all the performances one has attended at Minneapolis, Stratford Ontario and Chichester. It is a handicap that must be accepted: of course it could be argued with regrettable justification that complete audibility is not guaranteed in a proscenium theatre of equal capacity. On the proscenium or the open-end stage, however, those actors who have taken the trouble to master the tools of their trade can usually project sound successfully: on the arena stage there are directional difficulties which even the ingenious disposal of sound

reflectors and expert projection do not entirely overcome. It may well be that only in a theatre of smaller capacity could the difficulty be completely avoided.

It is reasonably certain that the first season at Minneapolis will be a financial as well as an artistic success. Before the theatre opened, advance booking was over $330,000 which was about 50 per cent of the estimated running cost of the season. The demand for tickets was, of course, heaviest from the middle-west, but it is understood that people from all over North America and elsewhere were included. This was to be expected as the opening of such a theatre is a significant event. It is quite confidently expected that audiences will be maintained after the theatre has ceased to have novelty value. It is estimated that 75 per cent of maximum revenue capacity will pay all operating costs.

After the first season of 20 weeks (May 7th to September 22nd) the theatre will be used by the Walker Art Centre for an average of three nights per week (October to March). Other organisations will be able to hire the theatre and it is expected to be in constant use for musical performances of a wide variety, orchestral and choral, for ballet, drama, films, lectures, etc. It would not be surprising if the Minnesota Theatre company were to tour their repertoire to other cities between the seasons at Minneapolis.

It is appropriate that this new theatre should bear Guthrie's name. He has put into practice his theories about actor-audience relationship for the classic drama. How far this will influence the planning of theatres generally is not yet clear.

CORRESPONDENCE

What is a theatre for?

September 25th, 1963

DEAR SIR,

Mr. Bentham's entertaining article in your September issue asks the question " What is a theatre for? "—the entertainment of the audience or the pleasurable occupation of the actors and stage hands? In the mind of a dean this naturally raises the question " What is a cathedral for? " It had not occurred to me that the similarities between the two problems were so close. The visitor to a cathedral service on a weekday certainly, and perhaps also on a Sunday, might well conclude, mistakenly of course, that what was going on was " for the entertainment of those who work therein ", in this case the dean and canons, the precentor, singers and vergers. " I must be careful," he might say to himself, " not to interfere with their fun " (by trying to join in their singing for instance).

But at least today he is not told to go elsewhere. That was in effect the solution of the problem when Ely Cathedral's main function was to be the conventual church of the Benedictine community which built it. For a long while the monks endured the presence of the villagers of Ely at their services but finally this nuisance became more than they could bear and they built a church just outside the cathedral for their worship and were in future free from the intrusions of an audience. If the kind of entertainment once provided by the music hall could be developed in close proximity to our theatres—and of course its receipts taxed for the support of " legitimate drama "—there might be here a solution of the problem set by Mr. Bentham.

I hope you have space for one other point. Mr. Bentham quotes Percy Corry's remark that present-day theatre audiences are " conditioned to discomfort ". This may well remind any church-goer of his attendance at a service. Churches and, I believe, law courts are now the only places where the audience is asked to sit on wholely unpadded forms. I have read a number of explanations for the fall in church attendances in our time. Has sufficient attention been paid to this one? The only place of worship in which I have found really adequate provision of well padded seats is the Church of England chaplaincy church in Monte Carlo!

Yours sincerely,
Patrick Hankey
Dean of Ely.

Indirect Lighting

Following Mr. Basil Dean's and Mr. Theodore Fuch's references to ***Louis Hartmann's indirect lighting, Mr. Stanley*** *McCandless the well-known American author and lecturer on stage lighting has these observations to make.*

Dear Mr. Editor:

Concerning Louis Hartmann, Belasco's electrician since 1901, he had had a great deal of experience and was very helpful to me in my early years of teaching.

Hartmann maintained a machine shop in the sub-basement of the Belasco Theatre. Mr. Belasco prided himself on the excellence of the lighting of his productions. He instituted lighting rehearsals and poured several thousand dollars into Hartmann's shop each year. Belasco encouraged Hartmann to innovate a number of new developments and techniques which he describes in his book.*

Hartmann got the lamp companies to make the first concentrated filament **lamps for spotlights and small beam projectors (parabolic reflector units).** He was **the first to install a series of boxes on the balcony fascias for front lighting.** These **boxes had art glass doors which when closed looked like the rest of the** lighting fixtures in the auditorium. When the houselights dimmed, the doors to the boxes opened silently and allowed the beams of light to project onto the front of the stage. Naturally very few in the audience were aware of this source of light. This was typical of the Belasco method and Hartmann was the man to carry it out.

These front lights coupled with a large extended canopy over the footlights which masked a row of baby spots also focused to the front of the stage, made footlights unnecessary to a large extent. This of course started a great cult of doing away with footlights without always replacing them, unfortunately, with the subtle means that the Belasco-Hartmann combination developed.

Another innovation was the focusing reflector first border strip for localising soft warm light on the acting area. Six spotlights (made in Hartmann's shop) were fitted with an extra condensing lens to create a narrow beam and focused individually on a series of dished, diffuse, adjustable reflectors. The spots were mounted in a frame just over the front edge of the ceiling of a box set to give indirect light on the acting area (see Theodore Fuch's letter reprinted in your September issue of 1963).

There were two of these groups of indirect spots, one behind each half of the teaser curtain. It permitted of high trim and thus very little space lost between teaser and front of box set seiling.

Mr. Hartmann's own book* describes the production of the *Return of Peter Grimm* in detail. Mr. Hartmann gave me two of the 3 in. follow spots he made in his shop for this production. The meticulous care describing the lighting of this production was typical of Louis Hartmann's work.

After Mr. Belasco died, Mr. Hartmann served as electrician in the newly finished Music Hall where he was until his death. This brought to an end one of the distinguished early pioneers in the field of stage lighting.

Sincerely yours,
STANLEY MCCANDLESS

* *Theatre Lighting*, by Louis Hartmann. D. Appleton & Co., New York, 1930.

BOOK REVIEW

The Story of the Playhouse in England. Stephen Joseph. **Barrie and Rockliff. 25/–.**

The story of the playhouse as set out in Mr Joseph's book is good to read. The book is intended " primarily for young readers " and is broken down into nine easily digestible sections. At the end of each section is a list of sources giving particulars of anything quoted. These lists together with " further reading " recommended at the end make the book an interesting point of departure for the older student as well.

Our attention is drawn early in the story to a great many social activities which made a " direct contribution to the techniques of theatre ". Maypole dancing, games and Morris dancing on the one hand, royal pageants, tableaux vivants and tournaments on the other. This amateur group contribution is seen to be offset by that of the more professional gleeman, mime and minstrel—and later by the contribution of the religious in the dramatisation of ceremonies of the Church. The story is familiar but the telling of it is made vivid by anecdote and forty-seven illustrations.

The first " stages ", Cornish rounds, performances on carts are described and we are brought to the " dramatic sermon " (there is throughout a refreshing absence of hackneyed terminology). The story moves on through the commercialisation of the theatre to " Shakespeare and company ". The treatment here is swift, light, very conjectural and perhaps the least satisfactory. The story is at its best when the particular is being made vivid as in the next section dealing with the relationship between Ben Johnson and his designer Inigo Jones or later, when we are introduced to Garrick and his designer, Loutherbourg.

In the final section dealing with " new plays, new playhouses " of our own time there are fewer anecdotes and more questions raised. There are brief, lucid descriptions of new theatres which have emerged and are emerging, e.g. the Mermaid, Festival Theatre, Chichester and Lamda—though on this point it seems unfortunate that there is no description or drawing of the Questors theatre —an adaptable theatre whose plans were published some years before several of those mentioned.

Mr Joseph moves finally to some interesting and provocative statements about theatre in general, e.g. " A theatre in the round implies that there are no values and standards other than the ones represented by the surrounding people."

This story should do much to help dispel, for the young readers, the strangeness of the old form of theatre and for the older readers the strangeness of the new.

COLETTE KING

TABS INDEX

A supplementary index to TABS is now available covering Vols. 15–21, Sept. 1957–Dec. 1963. Copies are free and post free in Britain. Binders for TABS including the new Index are available at 7*s.* 6*d.* post free in Britain whilst present stocks last.