



TABS

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EDITORIAL

We remember our Science Masters trying to impress upon us certain laws—not the kind dispensed daily at Bow Street and Old Bailey but scientific and physical laws. Laws, mark you, in each case but with what a difference. The former kind of law stated what *did* happen, whereas the latter only expressed a fond hope as to what *should* happen even though commencing "Thou shalt not, you must, he cannot, they will only," etc.

But what of the former? Well, there was Boyle's law about gasses. Pressure times volume is a constant. That, as far as we can remember, is what we were taught, but blowing up balloons at a childrens' party recently gave us seriously to wonder whether we'd got it right.

Then there was Ohm's law. Current equals pressure divided by voltage. This one we find *does* function, and that without the aid of Civil Servants and solicitors to elucidate for us. *And* it works even at parties.

We had hoped the other category (*should* rather than *must*) would include our suggestion that readers asking us for free publications would simultaneously buy a copy of the "Glossary of Technical Theatrical Terms" which is now available.

Alas, far too large a proportion of applications for literature have been for free material only. Rather a reflection, isn't it, considering all profits from the sale of the Glossary are devoted to the Actors' Orphanage.

Still, it's never too late to mend. Two shillings per copy only. We do (and pay) the rest.

* * *

In our last issue we were rash enough to introduce our Creative Ego and judging by the volume of correspondence which Ego has since received, it would seem that this figure of fun made his mark. He himself rather feels that he has come to stay. The thought rather appals us, but this being the festive season we feel that it is perhaps kindest to humour the fellow. On one point, however, we have been insistent. In deference to the late James Agate, Ego changes his name hereby and forthwith to DIM. Confidentially we hope to keep him sufficiently from these pages to ensure that he succumbs to "Space Starvation".



DIM butts in here to point out that whatever we may think of him we can hardly overlook the rest of his family connections. These would appear to include Gertie Gasfilled, Clarence Coiled Coil, Percy Projector, Aunt Arc and Fanny Fluorescent. What an array! What an outlook! Obviously we are in for trouble in our future issues. And to think that we had already decided to have a few words about arcs and their operation in our next issue. Now we look like having to handle Auntie simultaneously.

Useful Information (?)

We understand the following (*inter alia*) are *not* subject to purchase tax :

- | | |
|----------------------|----------------------------|
| Ambulances. | Fish hooks. |
| Reapers and binders. | Driving whips. |
| Mousetraps. | Hearses. |
| Church bells. | Centrifugal organ blowers. |
| Plastic pepper pots. | Wigs. |
| Catherine wheels. | Public clocks. |

This must have greatly simplified Christmas shopping.

Useless Information

Maryland University recently announced that as the result of a 12-hour test, the "snail's pace" has been established as .000363005 miles per hour—according to the *Daily Express*.

Information Wanted

Will schoolmasters (and mistresses) please make a particular point of indicating in correspondence (a) that they are masters and (b) whether they write on behalf of themselves or the school concerned?

Quite frequently we have letters from—say J. Smith, on notepaper beautifully embossed “The School House” for example. Smith minor is no doubt flattered when we guess wrong and thank him for his order or enquiry on behalf of the school. Not so the Senior Science Master, when we cautiously ask him how much cash he expects to have left over after settling with the School Tuck Shop for the week.

Unfortunately we cannot always diagnose the status of writers, either from hand of writ or letter-heading. So will Those in Authority please do the necessary.

* * *

REGULATIONS AND RULES FOR PLACES OF PUBLIC ENTERTAINMENT

TO THE EDITOR OF “TABS.”

Dear Sir,

I was surprised to notice in your article “Regulations and Rules for Places of Public Entertainment” (Sept. '47), which you say is based upon the regulations of the London County Council, the following statement:—

“Back stage corridors to dressing rooms and all passages need only have secondary lighting.”

No. 50 of the regulations and No. 81 of the rules of the London County Council state quite definitely that, except in the case of small premises in which the Council is satisfied that such provision is unnecessary, “two independent systems of lighting shall be provided in corridors and staircases which form the means of escape from any stage or platform, or from any dressing or retiring rooms,” and that such lighting “shall be maintained continuously while the premises are in use and if there is not sufficient daylight to enable the performers, staff and other persons employed to see their way out of the premises.”

Yours faithfully,

E. L. SEAR.

We agree, and offer our apologies herewith. Owing to a most unfortunate transposition of the words “only” and “need,” we have given a completely false impression which we hasten to correct.

Backstage, passages, corridors and stairs must of course, have secondary lighting (in addition to primary) but this does *not* apply to dressing rooms, etc.

LIGHTING ARTISTS MUST LIGHT

It is unfortunate that the vocabulary of the theatre does not include an obviously descriptive name for the person who devises the lighting of a production. There is little cause for misunderstanding such descriptions as Stage Manager, Producer, Property Master, Wardrobe Mistress, Prompter, Musical Director, Scenic Artist, Stage Carpenter and others. But the "Electrician" might be the switchboard operator, the plugger-up of lanterns, the cutter-up of gelatines, or he might be the one on whom the producer depends entirely to devise the lighting. In the amateur theatre he is often expected to do all that and more but whatever may be his



... his incidental function.

incidental functions, the person who devises the lighting of a scene should be an artist and should stand in the same relation to the producer as does the designer of the scenery and costumes. His art is the only addition to the collective art of drama since the theatre was established by the Greeks and is as yet imperfectly appreciated. Technicians have put at the disposal of the artist a medium that is entirely unique in its flexibility of expression. It is a matter of infinite regret that lighting technicians should also have imposed on our strangely

acquiescent communities the awful abominations by which some of our highways are lighted—illumination which debases every hue in the spectrum and transforms us all into repulsive, jaundiced grotesques. Only our cultural immaturity prevents the responsible technicians from being publicly lynched, or at any rate indicted for an appalling social crime.

All lighting has two functions, the one utilitarian and the other aesthetic. It matters profoundly not merely that one should see without stress or strain but that what one does see has the essential quality of truth. The lighting designer who fails to appreciate both requirements is not an artist and should not be entrusted with the job of lighting the stage. He need not be a technician electrically but he *must* be a technician theatrically. He need not be able to recognise a kilowatt if he meets one but he must have available somebody who can be depended on to connect equipment to current with competence and some respect for the lethal properties of high voltages. It is not always appreciated by amateur theatres that safety regulations are not solely devised to make life difficult; the risks taken with the comparatively innocuous 3-phase A.C. make the prospect of life in an atomic age quite terrifying. It will help a little if the artist has electrical technique and he must, at least,

have some working knowledge of the capacity and limitations of the available lighting equipment.



The use of light must be as carefully studied and as skilfully directed by the lighting designer as are the words of the play by the actor. The written words are transmuted into living speech and thought by the infusion of light and shade and colour and by the graduation of intensity. The stage picture, by a similar process, becomes a credible and significant setting instead of the crude timber, canvas and paint of its construction. Unless the designer is as familiar with the play and its producer's interpretation as is the actor, the result will be an entirely personal expression that may or may not be a significant part of the more important whole. Yet it frequently happens that not until the dress rehearsal does either the producer or anybody else give the slightest thought to the lighting plot which evolves precariously by a haphazard process of trial and error and the loss of artistry and tempers.

Ideally, the producer should be his own designer since he has (or should have) a complete conception of the whole which he might not be able successfully to convey to another. He would then be better able to secure the subtle graduation of light and shade and colour that will provide emphasis to instead of distraction from the mood he wishes to establish. He knows, as every artist knows, instinctively if not scientifically, that the sensations provoked by both sound and light waves will vary in relation to their intensity and quality ; he knows that by skilful manipulation of sound and

light he can obtain from his audience strong emotional response to the sensations created. If the sensations are harmonious and complementary the emotional response is heightened ; if harmony is not obtained the response may be lost entirely—and the margin between unity and disunity is often most dangerously narrow. The true artist—whether he is expressing his artistry in production, acting or lighting—has a highly sensitised perception and is able to graduate



... strong emotional response.

the sensations with a certainty that is most real when least obvious.

If the producer relies on the independent artist to devise his lighting he must establish at once a community of ideas between them. Whether that community is well established or not the lighting artist must acquire for himself by careful study of the play, by frequent attendance at rehearsal and by consultation with those

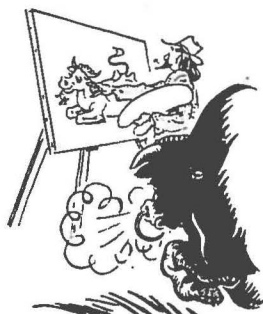
responsible for the design and construction of scenery and costumes, a complete appreciation of the moods of the play. Until he has that appreciation he cannot properly decide what effects he wishes to achieve and until he has made that decision he cannot select the means by which he is to secure achievement. He is often unfortunate enough to find his selection lamentably restricted ; that his total installation consists of a feeble footlight, a couple of battered battens and an odd dimmer of doubtful vintage and capacity, with little prospect of improvement due to a lack of bawbees in the kitty ; in which case it is just too bad but if he is of the stuff that lighting artists must be made of he will neither throw in his hand in deep despair nor will he vainly seek to soften the rough-hewn granite of the treasurer's heart. He will do the best he can in discouraging circumstances and the more success he achieves the more difficult will he find it later to convince his cautious committee that continued retention of the equipment with which he works is depriving the salvage drive of mild acceleration. If he is lucky enough to possess a spending department with a realisation that he cannot be expected to make bricks without whatever is the modern synthetic substitute for straw, he will perhaps possess or be allowed to hire equipment worthy of his skill.

Whatever the limitations of the equipment, the first need is the understanding of what effect is required. Then, and then only, will it be practicable to decide where the light is required, at what intensities and with which colours. The lighting artist will not need to be told that the colour filters obtainable are *not* restricted to Red, Green, Blue and Amber. He will *know* the full range and will select his colours with a nice appreciation of their effect on costume and scenery. He will obtain plans of the stage settings and prepare his own plans showing the disposition of the lighting and the positions in which it is desirable and practicable to place his equipment. If he is in the fortunate position of being able to use the stage well in advance of the dress rehearsal he will try many experiments practically before he begins to link the lighting together. In almost every case he will find it an advantage for a lighting plot to be committed to paper before the actual lighting rehearsal. The practice of hurriedly decorating the back of a cigarette packet with curious hieroglyphics during the pauses at the dress rehearsal may be popular but it cannot be guaranteed to be efficient or foolproof.

The lighting artist will regard his plot as the conductor regards the musical score. The conductor would not expect the orchestra to take down the notes on paper at the actual rehearsal and it is obvious that much time will be saved at the lighting rehearsal if the operator has a preliminary plot from which to work. Even if the artist works the switchboard himself he will require the plot but unless he is fortunate enough to have the board in the front of the house he should relinquish operation during rehearsal ; he *must* observe the effects from the auditorium. They cannot be judged from the usual switchboard platform ; in most theatres the operator

is lucky if he can see the lighting at all from that position. It is, of course, unlikely that the first plot will remain unaltered. Just as the producer maps out the actors' moves before the rehearsal begins and alters them as the scene develops before his eyes, so the lighting artist will modify his decisions when the imagined scenes become realities during rehearsal. And the lighting rehearsal is quite as vital as the word rehearsal. It is often possible and sometimes necessary to spend a considerable time on lighting what appears to be a simple show, as the artist is never deluded into a state of complacency by the fact that a cultured sensitivity to lighting and colour is still far from universal. Somebody can always be depended on to applaud his efforts however inappropriate they may really be.

As far as possible the actors should be excluded from lighting and scenery rehearsals. They, poor dears, imagine that such interruptions are quite unnecessary and only invented to waste their time; they know their performances are so good that the lighting doesn't matter anyhow and they just can't imagine what all the fuss is about. What they don't know, of course, is that quite frequently the lighting will make indifferent acting look good and bad acting nearly bearable. It is also a good idea to exclude



... opinions on the unfinished picture.

all those well-intentioned people who will persist in passing opinions on the unfinished pictures created; as it will almost always be impossible to exclude them, a strict rule of complete silence should be enforced on everybody except those directly concerned. The artist who works with light has an incomparable medium of expression which must be controlled with a sensitiveness that cannot be best exercised in a hubbub. He must guard against the danger of indulging in tricky lighting for its own sake, forgetting his responsibilities to author,

producer, actor, scene painter and costume designer. He must also remember that the audience expects to see as well as to hear and must curb any inclination to use for protracted periods that single shaft of light amid the encircling gloom.

Like all other arts, that of stage lighting has its own fashions, prejudices, traditions and jargon and the real artist will explore all but will avoid slavish adherence to any. He will for ever be striving for that consummate achievement that brings the glow of exaltation and the poignant pang of its impermanence.

P.C.

WORKING CONDITIONS IN THE THEATRE NOW—AND THEN

A comparatively recent meeting of the T.U.C. passed the following resolution—on, we believe, the suggestion of Equity.

“ This Congress, recognising that the living theatre is an essential part of the heritage of the British people, welcomes Mr. Hugh Dalton’s suggestion that there should be a Working Party for the Theatre. The Congress urges the Government to press on with this proposal and to set up a Working Party representative of all sides of the industry with terms of reference which will include such questions as the tendency towards monopoly in the theatre, the high level of theatre rents, the operation of Government subsidy through the Arts Council, the effect of entertainment tax, *the health and comfort of workers in the theatre*, and the need to bring the living theatre to working people.”

The italics in the previous paragraph are our own and by way of contrast we give below some extracts from the Regulations in force at the Royal Theatre, Turin, in 1834.

“ 1. The lighting apparatus must at all times be kept clean, and therefore all glasses and reflectors are to be thoroughly cleaned every day, and all Argand lamps of every kind must at the same time be filled with oil to their full capacity.

All the wicks must be trimmed with scissors level with the fittings in order to avoid an uneven flame.

2. It is forbidden to snuff the burners of Argand lamps with the fingers ; scissors must be used in order to avoid the dirt produced by the oil entering the holders or fittings.

3. The glasses of the Argand lamps are to be cleaned every day and tested half-an-hour before lighting, as also the reflectors, which must be checked at the time of replacing the glasses.

4. The containers of the footlights must be filled every other day and not less often.

5. It is forbidden to use half-flat wicks for the Argand lamps ; they must be whole wicks and suitable for the diameter of the lamps.

6. Every day the illuminator must have all the Argand lamps ready in the illumination hall, in order that the Superintendent may see that they are kept in condition, as above described.

7. The illuminator will be obliged to keep a sufficient number of men to carry out the above work, also to maintain cleanliness in the lavatories, both for the stage, and those of the theatre itself, and every evening a person will be told off to keep watch in the corridors and light again any lights that may have been extinguished either in the lavatories or in the lobbies.

8. The stage must be swept not less than three times a day ; namely, in the morning, afternoon and one hour before the start of the performance, and this before commencing the lighting.

9. The illuminator being responsible for the lighting effects, he must inform the managing Gentleman-in-waiting of any cause interfering with the efficiency of the lighting.

10. In the lighting room there must always be in readiness a receptacle full of chalk in case oil is spilt on the stage.

11. The artists' dressing rooms will be looked after properly by the illuminator, who will take care to remove all the keys, which must always be kept in the theatre for any emergency, especially in case of fire ; the keeper of the theatre will assist in this duty during the inspections of the dressing rooms which have to be made every evening."

It requires little imagination to speculate what would be the fate of any management insisting to-day on rule 7 for example.

The penalties for non-compliance were as follows :

"In the event of the chief illuminator failing to perform his duty, he will be punished by payment of fines as follows, his day's pay being calculated at Lire 4 :

1. For every lamp extinguished, semi-extinguished or smoking, in the case of the footlights, one fourth of a day's pay ; in the case of the stage, one eighth.

2. For every glass in the footlights missing, broken or blackened, one eighth of a day's pay.

3. For every lamp extinguished in the lobbies, if due to negligence of the illuminator, one sixth of a day's pay.

4. For every lamp missing, either in the cellars or in the boxes or footlights, according to the number which will have been fixed at the scenery rehearsal, one fourth of a day's pay.

5. For neglect in lighting either the footlights or the stage, four days' pay.

6. For lack of cleanliness on the stage on raising the curtain, three-eighths of a day's pay."

Fines were deducted from salaries and collected by the Superintendent of the theatre for distribution at the end of the season among members of the same department who showed most zeal in the execution of their duties, "due regard being had always to those most deserving of assistance."

Fines were not restricted to the lighting department, however. Musicians were specifically forbidden to quarrel in the orchestra pit during the performance, and this particularly as to where they should sit. "The musicians may not for reasons of etiquette, preference, seniority or pre-eminence, claim any particular position."

The artistic temperament must have been fairly frequently in evidence since "each musician must perform strictly on his respective instrument the music from the operas and ballet that is given to him and execute it exactly in accordance with the instructions given to him by the conductor or by the principal violin, both of the orchestra and of the ballets, and it is not permitted to omit any part of the music or vary it in the slightest particular.

During the performance, strict silence will be observed in the orchestra.

Any disputes between the members are forbidden in the orchestra when on duty and should questions of any nature arise, their settlement must be postponed until after the performance or rehearsal.

The leader of the orchestra will endeavour to avoid any noise among them in the theatre."

The " head scene-shifter " was liable to a fine of 50 lire (on the first occasion) for delays at rehearsals occasioned by non-completion of his work, and for mishaps during performances a mere 25 lire. For failing in their duty, attendants, call-boys and stage hands were punishable in the first instance by loss of two days' pay, in the second instance by six days' pay and in the case of repeated failure by a bigger fine and/or personal arrest. As a matter of fact anyone, including artists, were liable to arrest for "daring to cause any disturbance in the theatre or to use insulting or improper language to any of the superiors."

Doctors' Certificates were required from artists claiming to absent themselves for reasons of illness, such certificates having to be presented at the theatre before 11 a.m. on the day of the performance. In the case of rehearsals the certificates were only required a few hours before they were due to commence. The proprieties had to be observed and gentlemen artists, both singers and dancers, were expressly forbidden to enter the dressing rooms allocated to ladies after commencement of the performance or rehearsal.

Even in those dim and distant days it seems that some form of "get you home" transport service was in operation. The Regulations provided that singers and dancers "should not keep the carriages waiting at the doors of their respective dwellings longer than the time required to descend the staircases and the singers must likewise return home immediately the opera finished in order that the same carriages may be thus available for the dancers immediately the play is over."

H.M.C.

* * *

Glancing through a Science Journal recently we found an article on "The Velocity of Light" to the effect that (if experimental and other errors could be omitted or at any rate reduced to negligible proportions) there are some grounds for supposing that the speed of light is diminishing year by year. A series of experiments carried out over the last hundred years would certainly tend to substantiate this idea. It is interesting to conjecture what might ultimately happen if this phenomenon were to continue indefinitely. Lighting cues in the theatre would certainly become highly complicated, and one can visualise a dramatic performance where light and sound became misplaced as in a film with a badly synchronised sound track. In due course, one would presumably only be able to see what happened yesterday!

COLOUR IN THE THEATRE—No. 4

In the previous article we found that extensive colour matching is possible by adding together light of only three colours in varying proportions. The three colours must be Red, Green and Blue for this process as distinct from the Magenta, Yellow and Blue-green required for the normal subtractive process using pigments.

At first sight it would appear that in stage lighting all we have to do is to group our sources in threes, fit them with No. 6 Red, No. 39 Green and No. 20 Blue and three dimmers whereupon any colour from the various directions could be mixed up at the switchboard. Supposing for a moment this could be done, anyone with theatre experience will know that nothing much has been achieved thereby. The main difficulties encountered at a lighting rehearsal are not colour problems but have to do with the relative intensity, focussing and angling of the equipment to obtain the required modelling of actors and scenery. Colour in the theatre, as in the world outside, is purely an adjunct to form. In the cinema, we and numerous colour-blind persons do very well without colour, whereas all the colour in the world without form would leave us cold.

However, apart from this, the notion of three primary lighting groups would be inadvisable for two reasons: registration and efficiency. Registration is a term borrowed from the printer. In cheap shoddy colour printing the various subtractive colour blocks are sometimes out of register with one another so we get faulty and coloured outlines to our picture. The same effect is obtained in colour lighting when the sources providing the mixture are too few and too widely separated. For example, Amber light made up of an equal mixture of red and green light will be quite satisfactory from a magazine batten with a large number of red and green compartments at close centres. The multiplicity of shadows thrown by any object lit by this batten tend to cancel one another out.

If two large Red and Green sources, for example two 1,000 watt Spots, were placed as close as possible together, the red and green shadows would be plainly seen. In the case of small objects such as an actor's features the effect would be to provide poor definition and make his expression difficult to see; while on a larger scale he himself would throw three overlapping but plainly distinguishable shadows in red, black and green as shown in Fig. 1.

This registration question limits application of three colour mixing either to small wattage magazine battens or lengths when applied to the acting area or to the lighting of flat two-dimensional surfaces such as a cyclorama. The amount of acting area lighting that can be done from magazine equipment is restricted to general toning washes of colour, the main acting area lighting coming from high-power directional sources, such as spots, which as we have just seen are unsuitable for mixing.

When we consider application of three colour mixing to the stage battens and cyclorama lighting the second objection,

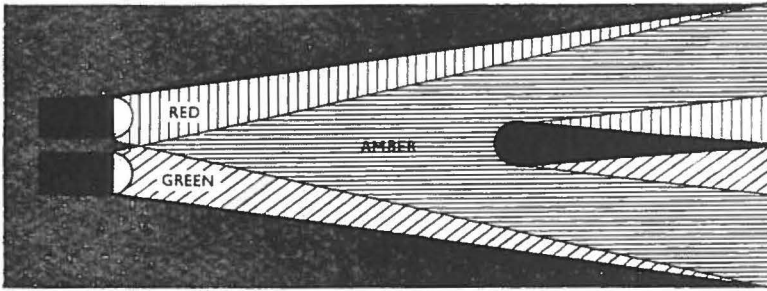
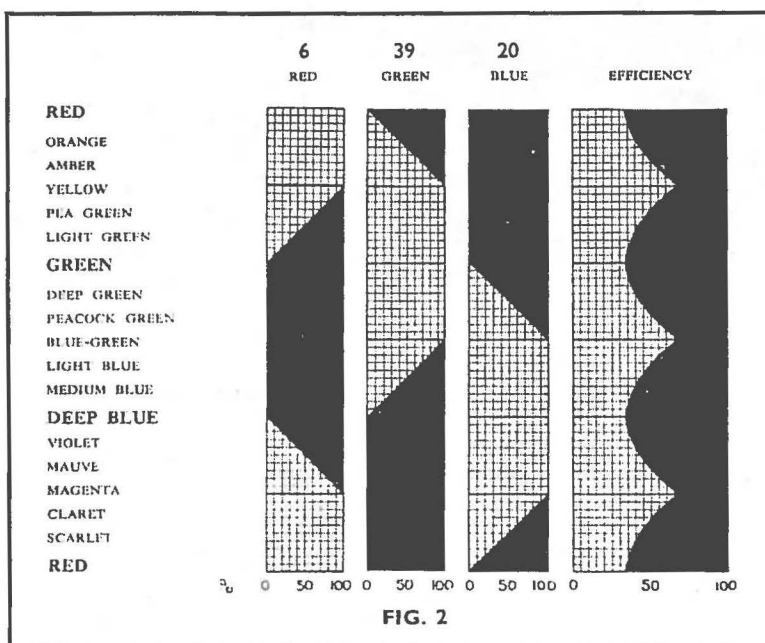


FIG. 1

“efficiency” crops up. Of the energy (wattage) that goes into a lamp only 10 per cent. approx. is turned into light ; the remainder becomes heat. Of this light the majority is suppressed by our three colour filters, and we are lucky if 6 per cent. to 15 per cent. is transmitted. An attempt is made to cut down waste by fitting efficient reflectors and by allowing filters to transmit quite an amount of other colour as well as the dominant hue. Thus Red No. 6 passing orange and some yellow is used, instead of Ruby No. 14 passing only the red band as primary. Similarly the Green No. 39 and the Blue No. 20 also pass a wider band of the spectrum than is theoretically desirable and in consequence though a great range of colours can be produced not *all* can be, contrary to the suggestion of some misleading propaganda. For example No. 14 Ruby, No. 16 Blue-green and No. 1 Yellow out of the standard stage filters : obviously No. 14 is less than No. 6, therefore how can any additive mixture produce a light which when thrown on coloured scenery will give the same result as No. 14 ? Except in effects such as the Samoiloff (see a future article) this need not worry us. Provided double wattage is used in the blue circuit to make up for the deficiency of blue in a gas-filled lamp, a very wide and beautiful range of colours can be obtained.

Nevertheless, questions of efficiency should make us think again before even the cyclorama equipment is fitted with primary colour filters. How many plays require an all-over green and how many an all-over red cyclorama ? At the bottom in the ground row perhaps ; but at the top these colours and their near relatives must be rare. The most used colours are firstly various shades of blue from steel to deep blue, and secondly greys, ambers, pinks and other dawn and sunset tints. Such colours can be produced as Fig. 2 shows from Red, Green and Blue mixtures ; but comparatively inefficiently, because for most popular colours dimmers are on check.

In Fig. 2 the percentage is that of dimmer handle travel and not of light, consequently the amount of light wasted is much greater than appears, since 10% dimmer travel at the full-on end equals a 22% reduction in light. The efficiency column on the right shows the amount of light used as a percentage of what could be obtained if all three circuits (with their filters) were full on.

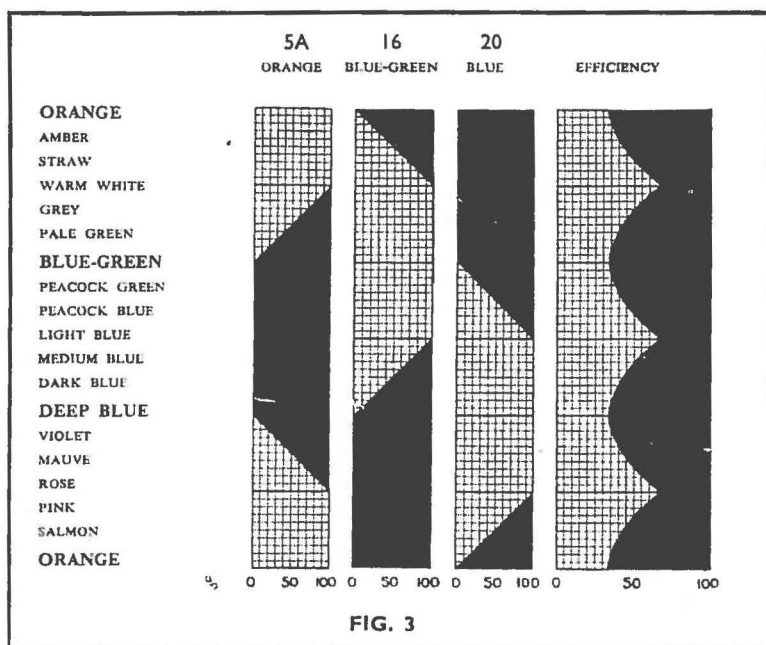


The solution for most purposes is to retain the primaries in the groundrow but for the cyc. top, and incidentally the stage battens where all over green or red are to say the least improbable, to use a non-primary combination. A suitable combination is Orange 5A, Blue-green 16 and 20 Blue.

This combination makes a flying start in that both 5A and 16 transmit a higher percentage of light than 6 and 39 respectively, but it is in the dimmer proportions used to obtain the colours commonly required, that the gain is most noticeable. Fig. 3 shows the dimmer positions and the percentage of possible light output used. Compare this last column with that of Fig. 2 for a day sky in light blue where the maximum intensity is essential. Remember that strictly speaking the figures are even more favourable since 100 per cent. 5A plus 16 plus 20 does in fact represent somewhat more light than 100 per cent. 6 plus 39 plus 20.

The Figs. 2 and 3 are part of a mixing chart* devised to give an idea of colour mixing procedure, which also includes tint mixtures where no dimmer handle is taken below 50 per cent.

*This chart is made up as a folding card to fit what tailors are pleased to call the vest pocket and is printed in colour. It may be had free, on application to the Strand Electric Head Office, or your branch. Please mention this article for reference purposes.



Efficient though this mixing system is, it must be obvious that when a play is due for a run, or a series of plays—as in a repertory season—are going to require nothing but blue skies, it will be wise to use various blue filters in all circuits. The reader should by now be clear that the stage lighting artist or engineer will have to take care to find out from the producer, in advance, the colours likely to be required on the cyclorama and acting area, and colour up accordingly; he will not, if he is wise, proceed on the assumption that every conceivable colour is likely to be needed, for that will lead to waste of precious equipment and current and probably a less brilliant effect.

F.P.B.

Errata last article, No. 3.—Although Magenta was correctly referred as No. 13 in the diagrams it unhappily appeared as No. 15 in the letterpress; probably a tribute to F.P.B.'s handwriting.

Next article will describe how to obtain some specific effects such as dawn, fine day, night sky and fog with the cyclorama.

MORE ABOUT COLOUR

A reader writes : Would you care to deal with the following in a " TABS " issue.

1. If we recognise colour as being the light rays reflected off an object on to our retina which advises our brain that it is for example green, does this imply, as I have heard or read somewhere, that no object on earth is inherently coloured but that it depends for its described colour upon the recognition by the human eye of the particular reaction a particular article has (by nature of its particular make-up) to light rays falling upon it ? In other words, is the world inherently of a neutral appearance, or of no appearance at all, waiting only for our eyes to react and give it its appearance ?

2. If an object does possess in itself a colour, why cannot it be recognised in the dark ?

3. Finally, does the above theory explain colour-blindness, *i.e.*, one pair of eyes will define a colour as blue whilst " abnormal " eyes react with a " green " impression ?

4. Is colour-blindness confined to confusing blue and green ?

F.P.B. replies—

It seems to me that colour has essentially to be considered in relation to the human eye. It is the result of messages received in the brain via the eye. We have to say the human eye because in some animals the response is rather different to ourselves ; they are, as we say, colour-blind. Then there is the eye of the camera (photographic or television) which " sees " wavelengths of the so-called invisible light shorter and longer than our spectrum (ultra-violet and infra-red respectively). Colour-blindness which affects about 4 per cent. of men but very few women can be explained as a defect of one of the three sets of " nerves " referred to in my latest article. They are either green-blind or red-blind though not necessarily acutely. It might be just as well to ensure that stage lighting workers are tested for colour vision. May I repeat the three colour response is only a *theory* but one which has stood the test of time very well.

It may have been noticed that it is not necessary to have complete darkness for colour perception to fail. By starlight for example, the red and green " nerves " go out of action and we see everything in terms of black and white. This effect is known as Purkinje effect and is related to the fact that the retina consists of two types of reception, rods and cones ; the former are used for low intensity vision and the latter for high intensity and colour vision.

These questions can be further explored in *The Science of Seeing*, a shilling Pelican, A157 (1946), or, as this is probably unobtainable, in *The Universe of Light*, by Sir William Bragg, a larger work which should be in any decent library. Both works are written in non-technical language.

TELEPHONE, WHITEHALL 2400.



WAR OFFICE,

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LONDON, S.W. 1.

30-10-47

J. D. H. Sheridan, Esq.,
The Strand Electric & Engineering
Co. Ltd.,
24 Floral Street,
W. C. 2.

Dear Sheridan

Please accept my grateful thanks for the very great assistance given by your organisation in the Alamein Reunion 1947.

The success of the evening was due in no small measure to the excellent lighting effects so expertly arranged by your staff.

Yrs. sincerely

Donaldson of Alamein

Once again Strand Electric were entrusted with the lighting of the Alamein re-union at the Royal Albert Hall.

* * *

Congratulations to Haslingden Arts Club on their admirable Diary-cum-membership card. The 18 pages (within stiff board covers) give names and addresses of officers, "fixtures" for the next six months, details of the six committees, booking arrangements and agents, subs., venues of rehearsals and so on. And why don't more Societies publish (on their programmes at least) the time a show finishes and the times of buses, trains, etc., thereafter?

A MODEL STAGE

One of the great snags about making model stages is—or so it has always seemed to the writer—the difficulty of making miniature lighting equipment which will simultaneously look its part and function to scale. It is not so difficult to make miniature spots, floods and all the rest, nor, by the use of such makeshifts as paper fasteners, seccotine, sticking plaster and so on, to make lighting units which will produce the desired result. But to make an article which produces the required intensity and beam angle and at the same time is to the correct scale and looks anything approaching its grown up counterpart is a real problem.

We give below some details of a model which its builder, Mr. J. P. Bannister of Edinburgh has sent us. Fig. 1 shows the

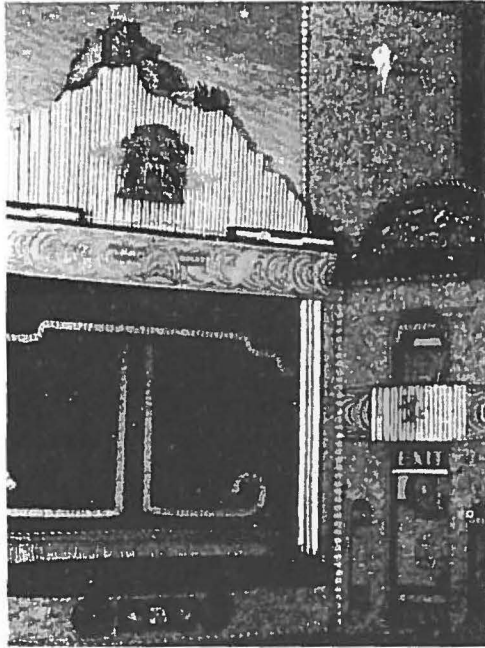


FIG. 1

Proscenium with the Auditorium lights off. The colour scheme is blue (curtain and pelmets), silver and red. To give an idea of the scale, the height of the Proscenium is 2 ft. 6 in. and the width 2 ft. 8 in. Over the Proscenium Arch may be seen a model of Edinburgh Castle, and below that the Coat of Arms of the same city. Over the boxes on each side are "fountains" and just under the boxes and exit signs are concealed Front-of-House spotlights. Along the front edge of the orchestra pit are "blinders" or dazzle lights for use during quick scene changes, a loud speaker and "fire alarm" bell.

Fig. 2 shows the Auditorium with the house lights on, the Castle being floodlit and the Coat of Arms illuminated.

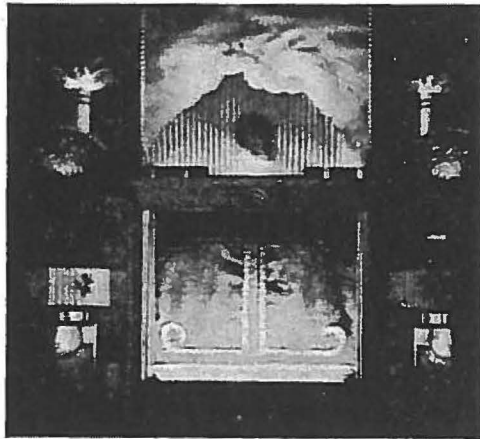


FIG. 2

The lighting system operates from the mains (230 volts A.C.) via bell transformers, each one controlling a particular circuit, e.g., footlights, front-of-house spots, house lights, battens, etc., and utilises 3.5 or 4.5 volt bulbs. "Spots" are obtained by using solid-head bulbs (very difficult to get now, by the way), and masking with a short matt black tube of cardboard or similar material.

The circuits are roughly as follows :

- Footlights—5 colours all on dimmers.
- 4 Battens—3 colours all on dimmers.
- 1 Spot Bar with 7 spots on 2 dimmers.
- Float Spots—3 on 2 dimmers (P., OP. and Centre).
- House lights—16 on 1 dimmer.
- Boxes and Exits—4 on 1 dimmer.
- 2 Auditorium Side Spots on 2 dimmers.
- 8 Stage Plugs on 3 dimmers.
- 6 Wing-floods on 3 dimmers.
- 10 Spots in Proscenium Pelmet on 2 dimmers.
- 2 Dazzle lights.
- 3 Pilot lights backstage (no dimmer).
- 8 Front-of-house spots on 2 dimmers.
- 2 " Rain " spots on 1 dimmer.
- 1 Proscenium flood on 1 dimmer.

The last three items are housed in a small unit which hangs in front of the Proscenium just above the line of sight at the top of the Proscenium opening.

Fig. 3 shows a setting of a kitchen of a country house. Mr. Bannister builds settings for the fun of lighting them—lighting being the be-all and end-all of the model—and while he tries to

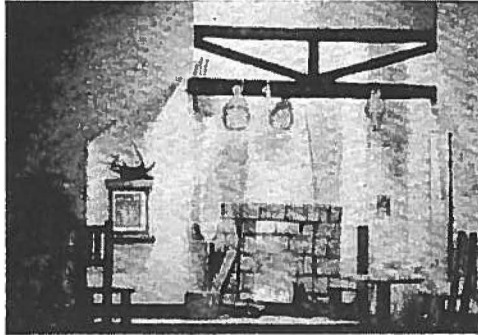


FIG. 3

make the equipment look as near the real thing as possible he makes it to produce the correct results primarily. The model has a revolving stage (hand-driven at the moment but due, we understand, for electrification when a suitable motor can be found), an Asbestos Safety Curtain and an Advertisement Curtain.

By bringing the switchboard (Fig. 4) round to the front of the

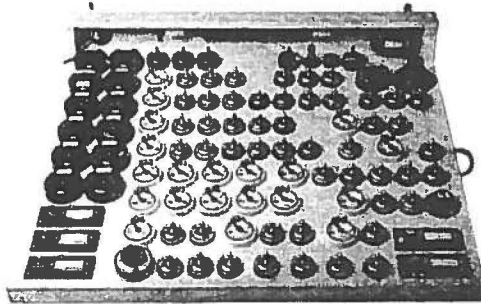


FIG. 4

model and placing it on a card-table, many hours of interesting experiment can be put in, each effect being visible as the various switches are manipulated. What an example incidentally, to the full-sized professional theatre !

At the top left hand corner of the switchboard are master switches between mains and transformers. In the bottom left-hand corner are three push buttons for lightning effects. At the top right-hand corner is a motor resistance for an electrically-driven revolving disc in front of Auditorium spots to give rain effects, etc. In the bottom right-hand corner are controls for electric bell and

buzzer and also loud speaker volume. In the centre of the panel are the dimmers and the whole is illuminated by a concealed strip-light at the top. The size of the panel is 1 ft. 10 in. by 2 ft. 1 in. and it incorporates, we are told, no fewer than 92 switches and 10 transformers. The switchboard as a whole is connected to the stage by 8 ft. of 80-core lead.

It would have been very interesting to show an illustration of the lighting equipment itself but unfortunately apparently no photographs are available. We understand however that Mr. Bannister would be pleased to give further details or to compare notes with any local Model Theatre or Lighting enthusiast. His address is 9 Polwarth Terrace, Edinburgh 11.

C.

GOING PLACES

During the last twelve months personnel of The Strand Electric have travelled over 25,000 miles by air and over 7,500 miles by sea. These figures are not of course really indicative of our Export effort, since many of our products which go overseas are sold in London, or the orders therefor are received by post; in neither of which cases is any travelling involved. Furthermore, these figures take no account of the Export Buyer who visits us and literally places his order on the premises. Just how many different nationalities have called on us here in London in the last year we cannot recall. An overseas visitors book would be most interesting.

Another 3,500 miles will have to be flown for Strand Electric staff at present overseas to return to us, and by the time this paragraph sees the light of day it is anticipated that a further 2,000 miles air travel will have been added to the total.

We are of course loyally supported by our own Agents in many countries, and just how many miles they have travelled we shudder to think. All the above figures are of course ex-London, and if we wished to gild the lily we could add on another 2,000 miles of overseas rail travel. Details are, however, comparatively unimportant, the point at issue being that in our quiet (and somewhat specialised) way, we are, like everyone else, not only trying to push the boat out, but to push it overseas farther and farther.

* * *

The SEECOL CLUB—the social club of the Strand Electric & Engineering Co., Ltd., recently held its first post-war function.

Approximately 300 people attended a dinner and later witnessed a performance at the London Palladium, where Mr. Tommy Trinder found time to comment from the stage on this visitation.

THE RICHARD SOUTHERN THEATRE RESEARCH COLLECTION

Twenty years ago a certain student of stage scenery began to make a collection of magazine clippings of pictures which interested him about the theatre. He mounted them on separate sheets of manilla paper and kept them together in the loose cover from an old copy of *Willing's Press Guide*. The student's name was Richard Southern and the contents of the Press Guide cover have now grown to a boxed and classified array of pictorial information running into 6,000 items, and—says the founder—only now beginning to take shape as the basis of that working collection of theatrical reference which he considers essential to study of the theatre to-day.

It is interesting to look at the growth and scope of this collection and to ask what the use of such a thing might be to the modern stage.

To begin with it must be stated that its scope is limited. It is confined very particularly to the practical side of the theatre. Every single item in it has been chosen to illustrate the practice of putting on a show before an audience, and to concentrate on the *what ?* and the *how ?*

It is this quality first and foremost which makes the particular character of the collection. It is in no sense a general assembly of everything and anything theatrical. There are apparent gaps ; for instance you find few theatrical portraits—figures are only included if they have some direct interest as regards costume. The commonly-found pictures of theatre exteriors are relatively rare here, but every representation of an interior which shows the lay-out of the auditorium, or the appearance of the stage, is welcomed. The gaps have, however, already been covered by other collections, and, within its self-imposed limits, the range of this collection is unrestricted. It covers every period from to-day back to the earliest theatrical ritual as exemplified in surviving folk-customs, and it aims to include something at least from every country of the world from which information on theatrical methods can be obtained. The scope of the collection is thus made clear at the outset, and a student who is working on some other aspect is enabled to turn at once to a small file wherein it is hoped eventually to have a brief guide to every established theatre collection known. There he may find in which of them he is most likely to discover the kind of information he is seeking. In such a way the present collection will serve not only in its own right as a collection but also as a guide to other collections which specialise in other aspects of the theatre.

The growth of the collection from the days of that small bunch of cuttings in a loose cover has been in four main branches :

1. **Technical information on modern methods of scenery and equipment.** This contains, beside every available book on the subject, a classified collection of illustrations, diagrams and specially-

taken photographs, and also the foundations of a study of the planning of stages in small halls, and of the elements of theatre architecture ; much, admittedly, may be added here as knowledge increases. It is interesting to see, in passing, that the pamphlets and catalogues of the Strand Electric have a prominent place in this section.

2. **A small classified series of photographs of modern settings** supplements the previous section and offers a review of scenic tendencies to-day in Europe and America.

3. **The history of scenery.** This is the largest branch of the Collection, and contains examples from every available period and country. It is especially rich in British history, and the avowed ambition of this department is eventually to include a reproduction of every known document in existence directly relative to the development of British stage scenery at any period. Special attention is paid to technical information.

4. **The development of British playhouse design** has formed, almost of its own accord, a footnote to the rest. What use is the study of scenery if we neglect the frame in which it was set, and which contributed so much to the real effect of the actual show as it appeared ? Examples of continental playhouses are admitted here, at present chiefly for comparison, but so far as the British theatre is concerned it is the aim to include in time every available piece of evidence.

Such, then, is the growth and scope of the collection. What, now, is the practical value of such a thing to-day ?

Its use is to answer questions.

It is highly significant, therefore, that in the theatre to-day there are more questions being asked on every side than at probably any other period of our history. A desire to know more of the job and to gain all available information is coming to replace the earlier attitude which recognized no horizon but its own, and consequently sought to close down upon the knowledge it had and make of it a "trade secret." We are discovering to-day how much wider the horizons are, and how the other fellow may easily get far ahead if we do not keep alive to all the possibilities of the theatre. We ask afresh what those possibilities are—and we find, when we put the question, how very much more exists to be known than was at first apparent.

From students and teachers, from amateurs, from producers, from architects, from writers, from designers, and from national bodies, the questions come :

How is a stage equipped to-day ?

How is a scene prepared for use ?

How were theatres planned at this or that period ?

What was the kind of picture presented in the typical theatre of any given age ?

How was such and such an effect obtained and what did it look like ?

What physical conditions were set by the theatre for the playwrights of a given period of drama ?

What kind of stage machinery was in use at a given period ?

What kind of general picture can we form of the development from one given period to another, or of the particular work of any period or country ?

What other ways of making a background to a show have been evolved beside that of building a realistic picture of a place ?

Such questions a practical Theatre Research Collection could help to answer. The Richard Southern Collection aims to do so. It is now sufficiently developed to be of use in such a direction and it is, moreover, sufficiently developed to deserve not only use but increase. Not only should it be consulted by the enquirer but it should be contributed to by anyone who has a photograph and a diagram of an interesting set, or the plans for a notably good, or a notably bad, theatre, or the knowledge of the existence of a significant relic whether building or picture—or indeed any material capable of increasing the resources for answering the questions likely to be asked by those enquirers who will make the theatre of tomorrow.

The idea set by this collection is worth watching. A group of interested people should gather to foster it. Something of its work is recorded in the little quarterly named *Theatre Notebook*,* which we have mentioned in an earlier number ("TABS," vol. 4, No. 2, p. 20). And some such collection for the increase of knowledge is essential, not only to the coming theatre of tomorrow but to the immediate theatre of to-day.

MARK HARRISON.

**Theatre Notebook is a non-profit-making magazine and is available on direct subscription only at 12/6 per year from Ifan Kyrle Fletcher, 12 Lansdowne Road, Wimbledon, S.W.20. Strand Electric regret they are unable to supply copies.*

MAKE-UP

We are indebted to M. H. Benoliel, the author of "*Stage Make-up Made Easy*" for a copy of the book which is published by *H. F. W. Deane & Sons, Ltd.* It is an excellent instructive manual for those prepared to spend some time in acquiring proficiency in this necessary and fascinating part of the actor's art. Many an accomplished performance has been ruined by lack of expertness in make-up. How often has a neck barren of grease paint caused members of the audience to speculate idly on the leading lady's inability to obtain White Windsor on the black market, when they

should have been irresistibly moved to tears by her amatory misfortunes? How frequently does the youth whose voice has only recently dropped an octave try in vain to persuade a sceptical public that he has achieved prosperous middle-age, with nought to assist in the delusion but a few "greying" hairs on the temple and lots of awful lake lines masquerading unsuccessfully as wrinkles? And why do members of the chorus and ballet often forget that in the absence of tights their legs can be anything but attractive if left devoid of an artificial bloom?

The actor who has a keen interest in his job realises that his make-up is of even more importance than his costume. He will make quite certain he is not dependent on the time and skill of somebody else to obtain this aid to characterisation. Make-up is only one of the changes to be wrought by the actor in himself and only he can properly create just the effect that will harmonise with the rest. He cannot be wholly successful until he has acquired skill in the use of grease-paint, powder and crêpe-hair. If he cannot tackle any make-up, however tricky, he should at once get a copy of "*Stage Make-up Made Easy*" and spend an hour each day with the book and his box of grease-paints until he can. Whether it is as easy as the title suggests depends rather on his ability to do as he is told by the author.

Having our own special concern with lighting, we could have wished the effect of light and colour on the make-up had been more comprehensively stressed but what is said is enough to emphasise the need for some study of the colours to be used in the stage lighting before the make-up is applied. We gladly offer to the author the hospitality of our journal if there is any inclination to expand the instruction.

This is one of the best publications on make-up we have read.

P.C.

BIBLIOGRAPHY

Readers have suggested that the following books should be added to the list of those dealing with the technical aspects of the Theatre which appeared in our last issue.

- Producing School Plays.** By Ernest F. Dyer (*Thomas Nelson & Sons*).
(Three chapters on setting and a long one on lighting.)
- The Technique of Play Production.** By A. K. Boyd (*Harrap*, 1934).
- The Technique of Stage Lighting.** By R. G. Williams (*Pitmans*).
- A Textbook of Stagecraft.** By S. Richmond (*Deane*, 1932).
- Stage Scenery and Lighting.** By Selden and Sellman (*Crofts*, N.Y., 1946, *revised*).

IRISH PLAYS FOR AMATEUR SOCIETIES

P. J. Bourke, play publishers of Dublin, advise us the following plays are now available for amateur groups, and may be obtained from Messrs. Samuel French of 26 Southampton Street, London, W.C.2.

- KNOCKNAGOW**, a three-act drama-comedy, by *Seamus de Burca*, from the novel by C. J. Kickham. Period 1846-47. Two settings, 12 males, 7 females ; some parts can be doubled 2s. 2d.
- ARRAH-NA-POGUE**, famous three-act play, by *Dion Boucicault*. Simplified settings. Period 1798. 8 males, 2 females with supers. 2s. 2d.
- FIND THE ISLAND**, a three-act farcical comedy, by *Seamus de Burca*. Two settings, 6 males, 5 females 2s. 2d.
- O'DEA—LAUGHS**. Seven Jimmy O'Dea revue sketches, by *Harry O' Donovan*. Simple settings and small casts 2s. 2d.
- VIGIL**, a tragedy in one act, by *A. P. Fanning*. 8 males. Period 1922. 2s. 2d.
- BOOLAVOGUE**, a play in two acts, by *Peader O'Cearnaigh*. One setting, 5 males, 3 females. Period 1798 2s. 2d.
- MICHAEL DWYER KEEPS HIS WORD**, a play in one act by *Peader O'Cearnaigh*. 3 Males, 1 female. Period 1800. } Two one-act plays in 1 vol., 2s. 2d.
- THEY MET AGAIN**, a comedy in one act, by *Seamus de Burca*. 2 Males, 1 female. }

TOURS WITHOUT TEARS

A member of our staff is at present touring, as junior electrician, with a play in order to gain theatre experience. The extracts below which were taken from one of his letters may give readers an idea of what goes on behind the scenes before the curtain goes up in a Provincial Theatre on Monday nights.

..... Theatre, Glasgow, Wednesday.

Dear

Thanks for the letter which I read on Monday morning with half-closed eyes.

I will relate as best I can the whole horrible story of getting out and in.

We finished striking* at 12.30 on Sunday morning and I went with the "electric" load to Preston which was an hour's run. (We were taking the gear to Preston by lorry and thence to Glasgow by train.) Well, we arrived at Preston at 1.30 a.m. and started unloading but unfortunately the trucks we were supposed to put our stuff in were full up with scenery marked "Dead End Kids of 1947." We called the inspector over and he swore most profusely and told us that the "Dead End Kids" had put their stuff in the wrong truck, but unfortunately for us they had disappeared, so we

decided to chuck their stuff out and put ours in. Well, we got as far as putting their stuff out but when we started putting our own in, the engine driver started waving his arms and shouted something utterly unintelligible in the Preston tongue, and the goods train we were loading pulled out of the platform.

It seems that the train was in the way of a goods train which was coming through, but we never saw the goods train, and a quarter of an hour later our train shunted back. We finished loading at 2.45 and we thought we had missed our train, which was 2.40, but the inspector who was very helpful said, "Hurry up, you'll just do it, the train is late—come across the line." Well, you can just imagine me with that darned big case and haversack getting across the lines at 3 o'clock in the morning. It was alright getting down—I just jumped—but getting up t'other side (which was a good five feet) was awful. We eventually got up, and saw the horrible sight of an empty platform the other side. The train we wanted was on the next platform, so over the bridge and on to the next platform we rush, and dive, or rather fall, into the train which fortunately was empty. (It was drizzling during all this.)

On arriving at Glasgow at 9 a.m. Sunday, after a few hours' sleep, we got a taxi to the Theatre, dumped our bags and started looking for digs. I had some food before doing so.

When we had tried 42 digs, we were whacked, but I insisted on trying one more where we were fixed up—not very good, but by that time we were willing to sleep anywhere. We collected our bags and went to our digs, where we had three hours' sleep and some food, and then went to the station, loaded the gear into lorries and then unloaded at the Theatre.

It was now 10 o'clock and we started getting the stuff up. At four o'clock (Monday morning) Mr. D. came across and said I was to get some sleep in a dressing room so I sneaked away and slept the sleep of the just until I was woken up at 9 o'clock. I had some food and we started setting and lighting. We kept going till six o'clock Monday evening, except for a break at mid-day. I had some food and it was then time for the show.

Although we had quite a bit of trouble I didn't feel at all fed-up or tired except on Monday evening. It's because they are such a good crowd—always cheerful and have got a joke at any time.

Well, I think that's about all for now so I'll wish you the very best and sign off.

Yours

P.S. Digs. this week are 50/ which isn't really bad I suppose.

** To "strike" in theatrical parlance means to dismantle scenery and equipment. In this case the striking took place after the evening performance at Blackpool.*

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