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MOTION PICTURE PRESENTATION

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*Remember — First Class presentation
will keep the public saying —*

"LET'S GO TO THE PICTURES"

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TO THE CHIEF PROJECTIONIST

WITH COMPLIMENTS

FROM

THE FILM INDUSTRY PLANNING

COMMITTEE

MOTION PICTURE PRESENTATION

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Read to a meeting of the British Kinematograph Society on November 1, 1950

THE subject of motion picture presentation is by no means a simple matter of good picture quality and sound reproduction alone, but goes much deeper than that, involving other important factors such as patron comfort and emotional stimulation.

Entertainment is a business, and can be defined as "To receive and treat hospitably, to hold the attention of and to amuse." Comfort, consideration and courtesy for the customer should be the primary aims. It is believed that it can be fairly stated that in no other business premises in the world is the customer given more consideration than in the properly operated motion picture theatre.

Nevertheless, we rely entirely upon repeat orders, for the customer purchases the product upon our guarantee of quality and satisfaction, and furthermore he pays for the product before he sees it. The task is ours to present motion pictures to the public in such a manner as to assure those repeat orders for which we strive so mightily.

The exhibitor is entrusted with the task of selling the product, and the box offices see the ebb and flow of the money that will finance the future.

Technical Aspects of Presentation

Many thousands of pounds are spent annually on presentation of motion pictures in the kinemas of this country, and the vast facilities of the electronic, electrical, mechanical, optical, and other fields, together with the latest developments in furnishing, acoustic and thermal materials, are utilised to the one aim of furthering the enjoyment and comfort of the patron. Only a perfectly co-ordinated combination of high quality projection and sound reproduction, ample comfort and calculated emotional stimulation will assure patron

enjoyment in full measure and thereby complete satisfaction.

Successful presentation of a motion picture entails painstaking attention to a multiplicity of small details, each of which, if neglected, can detract from the final result. On the other hand, due attention to each of these details will be rewarded by the excellence of that final result. We are concerned here only with the engineering aspects of motion picture presentation, but attention to detail is as necessary right through the wide field of kinema theatre operation.

Obsolescent Equipment

Let it be admitted right away that there are many kinemas in this country using equipment that is simply not capable of producing results commensurate with the desirable standards now recognised. The most conscientious projectionist cannot get out of any equipment more than its capabilities allow or, for that matter, get more out of a release print than it contains.

In the course of time and through force of circumstance, all kinema theatres will be brought up to standard, and this in itself will allow the present British Standards to be tightened up, for, rightly, they cater for wide variations at the moment.

To achieve successful motion picture presentation in the fullest sense of the word, projection and sound reproduction must be as nearly perfect as the skill and wit of man can devise. Lighting, both decorative and advertising, must be attractive and stimulating, and, at the focal point of the auditorium, used to create pleasure and vitality. Heating and ventilation must cater adequately for patron comfort through warmth and the movement of air without draughts. Carpets and decorations must convey a sense of luxury, seating must give

* Circuits Management Association, Ltd.

comfort over long periods of time. Cleanliness must make itself felt, and in fact, everything must be focused on the provision of satisfying entertainment and comfortable relaxation for the patron.

Structural Costs

It is not the purpose of this paper to examine in detail the technical complexities, but rather the broader aspects, and in this connection it might be interesting to give some indication of the costs of certain items embodied in the kinema which contribute very largely to "patron comfort." These figures are percentages based on the total cost of an average kinema built, equipped and furnished prior to the war, excluding the cost of the site.

Naturally these percentages vary in accordance with the type of building and the degree of "patron comfort" desired, but the following figures may be taken as an average for a typical kinema built between 1932-1939:

Projection and Sound	...	...	...	4.0%
Electrical Installation	...	...	...	5.1%
Heating and Ventilation	...	...	...	6.3%
Furnishings, Seating, Carpets	...	...	...	9.0%
Decorations, Fibrous Plaster, and				
Acoustic Materials	...	...	...	5.6%

In the main, no new kinemas have been built over the last ten years and so observations are naturally confined to what may be termed "present day techniques" and methods of operation. Behind the scene, developments and planning have been carried out unceasingly and one cannot foretell the surprises in store for the kinema patrons of the future.

Some members of this Society were able to hear Dr. Wells Coates present a paper on "Planning the Festival of Britain Kinema," and were privileged to get a glimpse of the possibilities of developments in the future. Nothing can remain static, we must always progress, and while the future must necessarily be shrouded in mystery, it holds considerable promise in our part of the entertainment industry.

I. PICTURE PROJECTION

High standards of projection and sound reproduction must be given first considera-

tion. Accurate determination of the suitability of grades of equipment for particular auditoria has a distinct bearing on the ultimate results.

The fundamental requirements for good projection have been discussed elsewhere, but from the patron's point of view these may be stated as:

1. Clear vision of the entire picture area from every seat.
2. Skilful and unobtrusive operation of the equipment.
3. Adequate screen illumination and brightness.
4. Suitably arranged surroundings to the picture area.

Viewing Conditions

The first item, that of clear vision, is somewhat elementary and more a matter of careful planning than anything else; but it is the first fundamental step in good motion picture presentation. No patron can enjoy viewing a picture area, part of which is obscured by the head, if not the shoulders, of another person seated within the visual angle subtended by the picture.

Good viewing conditions demand compliance with the Eyestrain Regulations in the relationship of picture size to seating layout. Distortion, both in viewing angles and in projection angles, must be kept to an absolute minimum.

The Skill of the Projectionist

The second item, that of operational perfection, is of paramount importance and calls for the full use of the projectionist's skill and sense of showmanship in presentation. It lies within the power of every projectionist to add to or detract from the final result, into which the brains and experience of a band of technical and artistic experts in every phase of film production have merged to produce what might well be the finest scenic and artistic presentation in the motion picture field.

So much effort is put into the making of a motion picture that final interpretation cannot be ignored. Here the skill of the projectionist makes itself felt, for in many ways he can help to turn what might be a

passable motion picture into entertainment value.

Consistency of screen illumination is perhaps the most important item under the direct control of the projectionist. Screen illumination that flickers, is unsteady or shows signs of uneven colour—the “blue” or “brown” corners that result from incorrect arc focusing or maladjustment of the optical system—reminds the patron of the illusory nature of the entertainment being offered and spoils his enjoyment accordingly.

Proper distribution of the light intensity across the screen is another factor under the control of the projectionist, and one which, when properly adjusted, adds its own contribution to perfection in presentation.

Picture focus is another item that demands constant attention. Sharply focused detail gives good clarity but necessitates some delicacy in adjustment. Picture focusing by the over enthusiastic sometimes gives rise to a slight feeling of sea-sickness among the viewers.

A keen sense of timing on the part of the projectionist is part of showmanship in presentation, and gives a polish to the finished product. Careful and split-second timing of screen tabs against titles and ends, of main tabs, of house lighting, all add lustre to the general effect.

Projector and Film Care

Modern motion picture projectors give a picture image that is amazingly steady considering the large linear magnification of the tiny film frame, and it is only when the projector needs repair, adjustment or replacement of worn parts that picture unsteadiness becomes detectable to other than the trained observer. Transient movements caused by joins or poor print condition are generally not observed by the audience, but any permanent weave or jump should be corrected at once.

Coupled with this question of operation of the equipment is the need for proper handling of the film stock. Scratches. “rope marks,” damaged perforations, and poor joins all tend to remind the patron of

the mechanical nature of the entertainment, and can utterly spoil outstanding photography and sound recording.

Change-overs are a potential source of programme discontinuity. They should be invisible and inaudible, and except to the habitual dot watcher they should pass undetected. There is no excuse for a poor change-over, even when the print is in poor condition, lacks standard change-over dots, and is probably mutilated by the trade-marks of incompetents. Unless there is definite discontinuity or badly cut dialogue, the patrons will not notice a good change-over, and good change-overs are the hall marks of good projectionists.

Screen Illumination

The third item, that of adequate screen illumination and brightness, depends upon the total light output available from the motion picture projectors and is, therefore, not generally under the control of the projectionist, except when it is less than normal owing to maladjustment of the equipment.

Much has been written on the subjects of screen illumination and screen brightness, and it is readily available for reference; it will suffice here to recommend that screen brightness should lie near the upper limit laid down in the British Standard No. 1404. This recommendation will assure “sparkling” picture quality and help both the film production technician and the laboratory technician in their efforts to give our patrons maximum clarity, contrast and beauty in photography.

It should be noted that to exceed the B.S.I. recommendation is less desirable than to be below the minimum, for it results in washing out certain prints and produces scintillation and flicker which cause visual discomfort.

The Screen

Screen surfaces are designed to suit different shapes and dimensions of auditoria, and a pre-requisite of good presentation lies in the correct choice of a suitable surface and its maintenance in good condition. A



A Typical Modern Projection Room.

compromise must be made between the maintenance of reflective characteristics and sound transmission characteristics. The greatest difficulty in maintaining reflective characteristics is caused by tar contamination due to patrons smoking in the auditorium. A proper system of regular resurfacing or replacement is necessary to prevent the reflection factor dropping too low and to correct the inevitable spectral shift. Each situation needs to be considered separately, account being taken of the type of ventilation plant and the inherent cleanliness of the locality.

Patrons look at the screen for long periods of time, yet the screen itself should be invisible to them. Any uneven deterioration will show up distinctly on highlights and pan shots, drawing the patron's attention forcibly to the screen itself as opposed to the picture image which they see normally.

Screen Surround

The fourth item, that of screen surroundings, is important if only because these surroundings are always within the visual field of the patron and when properly arranged help considerably to maintain the required atmosphere.

Whatever the form of surround or masking to the picture, symmetry is important, as the surround or masking is within the most sensitive part of the visual field and so, if masking lines are crooked, ragged or bowed, a sub-conscious irritation is set up which spoils the enjoyment. Too large an overlap of the projected image, uncorrected keystone distortion, and picture re-reflection from dusty masking, are other small items that tend to mar the ultimate result.

The apparent size of the picture image from different parts of the auditorium is another factor that must be considered. There is no enjoyment in looking at a postage-stamp from the rear of the auditorium, or for that matter in experiencing a stiff neck from gazing upward at an acute angle at a huge picture from the front of the auditorium. Experience, technical knowledge, and common sense can do wonders in providing an apparent picture size suitable for all parts of the auditorium. Draping of the proscenium has a great effect upon apparent picture size; a large proscenium opening draped with dark borders and legs will make even the largest picture look small by comparison. Intelligent draping designed from the picture viewing aspect is well worth careful study.

Visual Distractions

One of the most annoying factors to patrons is distraction from the focal point of the auditorium through various reasons such as re-reflection of the picture from a specular surface, which may be a lighting fitting, a brass rail, some glossy paint work, an organ cover or many other items. The stage floor should always be covered with a matt surface which will not reflect the picture, and it is sometimes convenient to use material that will be advantageous acoustically. Light screen curtains of specular material which lend themselves to very pleasing lighting effects sometimes add to picture re-reflection, but can generally be arranged so that they are drawn off behind non-reflecting legs during presentation of the films.

Discomfort glare which reacts unfavourably on good picture viewing conditions and degrades contrast is often to be found in kinema auditoria. These glare spots are most annoying and should be eliminated. Most common offenders are relatively brightly lit clocks, exit signs, maintained lighting fittings, entrance doors allowing shafts of sunshine into the auditorium, light from the portholes of the projection room, or even an usherette's torch.

2. SOUND REPRODUCTION

Sound reproduction should be such that speech is natural, vocal and instrumental music is perfect in tonal balance throughout the full frequency range, and dramatic effects, from the merest whisper to the thunderous roar of an earthquake, faithfully and intelligibly portrayed. Sound reproduction must also be perfectly synchronised with the movements of the screen image.

Requirements for successful sound reproduction in any kinema theatre auditorium are:

1. High quality sound reproduction heard without effort in every seat.
2. Intelligent operation of the sound reproducer equipment.
3. Good auditorium acoustical conditions.
4. Well recorded sound film tracks.

5. Well recorded and well maintained gramophone discs.

Salient points to watch on sound reproduction are intelligibility, distribution, and volume level.

Sound Volume

Basic volume level is of great importance and is affected by the locality of the kinema. If the locality be one where there is a predominance of noisy heavy industry then the basic volume level will be higher than in an agricultural area. Basic volume level should be adjusted so that listening in the rear stalls and rear circle is normal and effortless, and related to the number of persons in the auditorium at different times during the day.

In some auditoria, unnatural speech and harsh tonal quality are heard through excessive use of the available power output of the sound reproducer, which power output is always rated higher than the requirement for maximum volume for the particular auditorium. This excessive use of the power output causes distortion and acoustic break-up, with accompanying irritation to the members of the audience.

Another source of annoyance to patrons is extraneous noise, such as that emanating from passing traffic, noisy doors, curtain runners, etc., and every effort should be made to eliminate such sources of petty annoyance.

A possible source of unsatisfactory sound in an auditorium is the positioning of the speaker assembly. This is set to give maximum overall quality, distribution, and illusion, and where speaker rostrums are mobile or the assembly can be flown, any movement out of normal position will seriously affect these points.

To assure the maintenance of maximum results from the sound reproducer, quality must be constantly checked. Like other equipment there can be a gradual deterioration that is so slow as to defy detection. The degree of deterioration over a period of time may be considerable, although undetected, if there is no means of comparison.

Interval Music

An essential part of the presentation is the reproduction of gramophone discs, and considerable attention has been given to the design of the non-synchronous attachment to the main sound reproducer with the object of assuring the very finest sound reproduction from discs. Fidelity cannot be obtained, however, from discs that are badly worn, dirty or scratched. During an interval, patrons are listening, if only subconsciously, to the incidental music, and any imperfection in the sound reproduction will be noticed. The selection of discs of suitable type plays its part in patron enjoyment. Timing is important; music should not cease suddenly half-way through a composition or in the middle of a bar. It is far better to have a few seconds' silence than to have a discordant change from disc to film reproduction.

Presentation of a disc programme demands a deal of thought and will repay consideration. Discs chosen by someone with musical appreciation can add much to the enjoyment of patrons, and conversely, if badly chosen, can cause annoyance to many. Disc programmes to cover an interval before presentation of a feature film should be arranged with the motif of the film in mind. The disc programme presented with "Hamlet" is an outstanding example.

Auditorium Acoustics

In considering patron enjoyment, brief reference must be made to auditorium acoustics. Sometimes the sound reproducer is giving good sound, yet hearing conditions in the auditorium are still poor. This can be caused by unsatisfactory acoustical conditions where the rate of decay of sound from maximum to inaudibility is too long. Such an auditorium will have a high reverberation period which can be corrected only by the judicious use of acoustic absorbents. In some of the larger auditoria highly reflective surfaces can give rise to echoes, or to confusion caused by one tone being superimposed upon another occurring immediately afterwards. In such cases as low a

volume as is consistent with audibility will tend to alleviate the problem.

Patrons must not have to strain to hear the sound reproduction, otherwise they will become tired through ear fatigue, which will adversely affect their goodwill toward a particular kinema.

A service designed for the comfort and convenience of patrons is the provision of a deaf-aid system for hard-of-hearing patrons. Certain seats wired for lorgnette type handsets enable these patrons to enjoy the complete film and disc programme in comfort.

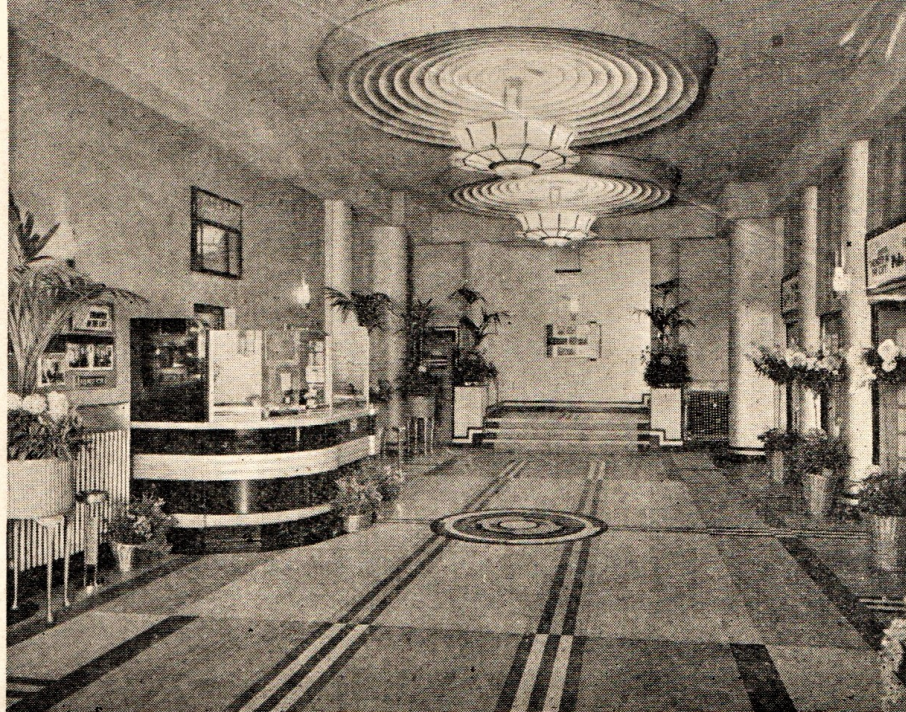
3. LIGHTING

Light has always attracted mankind, and the psychological effect of light is of great importance. Skilful use of this medium will do much to attract the patron to the kinema, and to maintain that cheerful and exciting atmosphere that is most desirable. There are times when its effect should be startling, and others when it should efface its own individuality in silent and inconspicuous service.

Developments in light sources, particularly in the groups of lamps known as discharge lamps, have placed further media in the hands of the lighting engineer with which he can produce many beautiful lighting effects designed to stimulate the emotions of the audience.

Lighting the Entrance

The main entrance is the kinema's "shop-window," and it must be remembered that a greater number pass the theatre during the day than actually pay for admission. The front-of-house is the focal point of attraction, and from dusk onward the effects achieved by well designed and attractive publicity can be greatly enhanced by skilful lighting. The attention of the passer-by is caught and drawn to a kinema entrance with a brightly lighted canopy and entrance foyer, while the architectural features of the building can also be brought into prominence by the use of neon lighting and coloured flood-lighting, so that the cumulative effect of the front-of-house is warm, luxurious and inviting.



*A well-lit Entrance, with the name of the Hall prominently lit ;
an inviting Vestibule.*

The objective always to be borne in mind is the creation, in every possible way, of that inviting atmosphere of comfort and relaxation.

Since we rely upon repeat orders, the goodwill built up by an individual kinema should be supported in every way, and the lighting of the name sign is an important factor as a symbol of that goodwill.

Regular maintenance and inspection of all outside lighting installations is very necessary, for lamps that have failed, the failure of a section of neon lighting or of illuminated interchangeable lettering, becomes very obvious to the passer-by whom we wish to attract, and spoils the whole front-of-house effect.

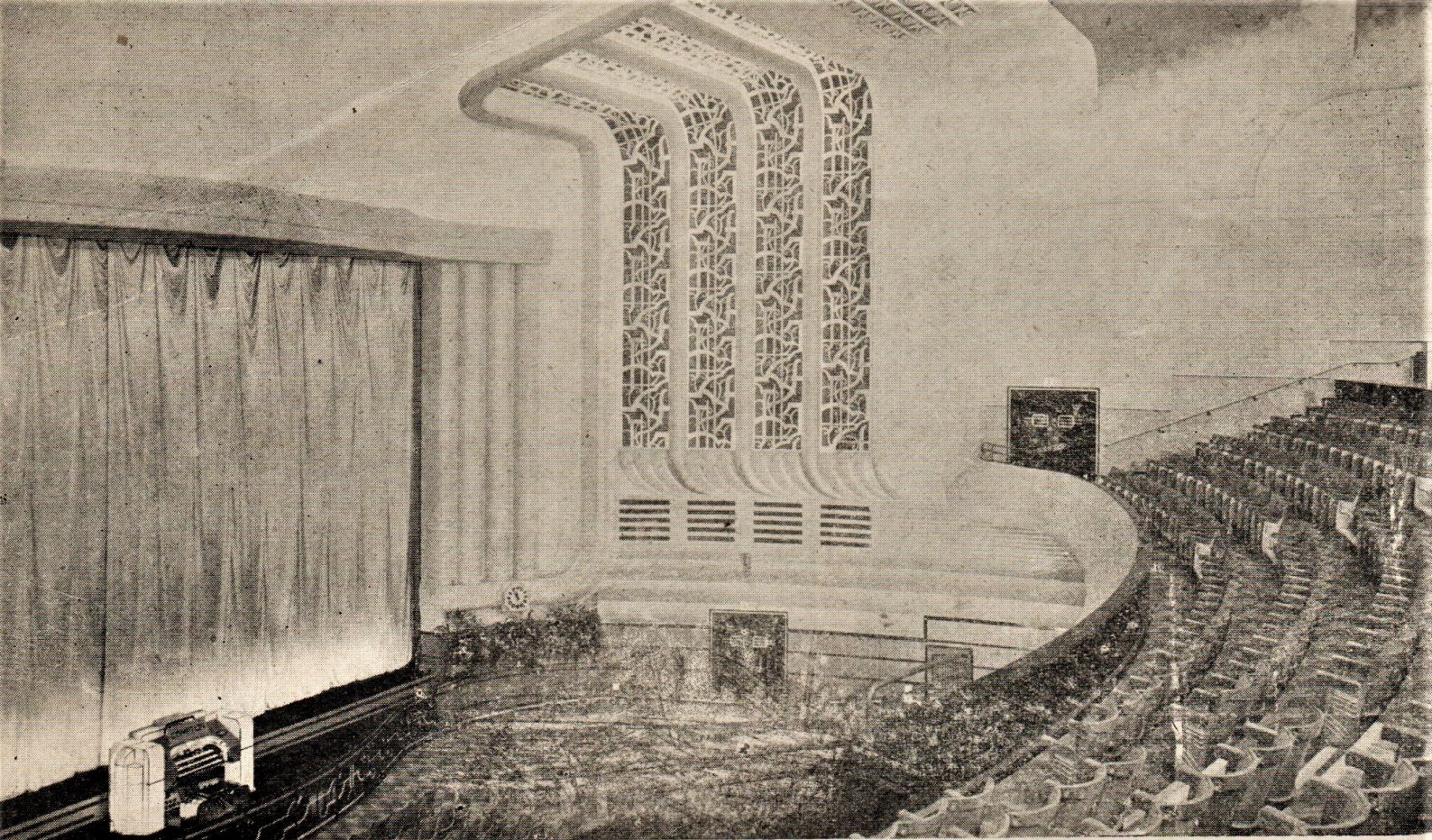
Auditorium Decorative Lighting

Within the auditorium, lighting is mainly decorative, housed in fittings designed to give a pleasing appearance and adding to the enjoyment of the patron. Smooth transition from full lighting to the warm glow of the maintained lighting will enhance presentation and maintain that slight air of mystery and unobtrusive service that are our corner-stones.

The lighting of the stage or screen end of the auditorium should be given all the at-

tention it deserves. Even the humblest kinema theatre has some form of screen end lighting, crude as it may be, and the best possible use of this lighting is an important part of presentation. This particular end of the auditorium should always look "alive." When incidental music is being played during an interval, the patrons should always have something to look at, and since an interval is always an anticlimax it behoves us to provide attractive lighting effects on the screen curtains and proscenium arch. Those who have television sets will have taken considerable interest in the fact that during the recognised intervals between items in the television programmes, incidental music is played, and instead of a blank screen, animated effects serve to provide some interest to add to the attraction of the incidental music. This in itself does tend to show that the necessary intervals during which time incidental music is rendered must form part of the programme.

The degree to which this phase of presentation can be taken depends upon two factors, the first being the extent of the lighting equipment available, battens, footlights, wing floods, number of colour circuits, number of dimmers, etc., and



A tasteful Auditorium.

secondly, upon the colour sense of the person operating the equipment. Much can and should be done in this direction, but not to the extent of painting the lily by arbitrarily altering the colour balance on the opening titles of colour films.

Maintained Lighting

Before leaving the question of lighting, reference should be made to the maintained lighting as another factor affecting patron comfort. The problem of affording adequate maintained lighting, in intensity and distribution, is one that is in itself extremely complex, and over a period of years has received a large amount of consideration by various bodies, including the British Standards Institution.

Unfortunately, there are many variables to be considered, among which are items such as decorations and furnishings, the colour and texture of which vary considerably over an extremely wide range. Another factor that must be considered is the difference in dimensions and shape of the thousands of kinema auditoria spread throughout the country. Yet another factor is that of intensity and distribution of lighting and its colour, while operational factors

such as location of exits, gangways, etc., make the problem even more difficult. Perceptibility of surroundings, even more than intensity of illumination, seems to be of key importance.

The adaptation period, over each set of circumstances that might arise, must be allowed for in assessing final results, for certain types of auditoria layout allow the patron to reach the auditorium, from what might well be a sunny day outside, without any opportunity of adaptation to the lower degree of illumination inside. Where layout lends itself it is possible to grade entrance foyers in progressively reduced intensities, so that opportunity is provided for adaptation of the patron's eye.

Proper design and distribution of maintained lighting fittings will satisfy the condition that the light emanating therefrom shall not degrade the projected picture, yet still ensure that patrons can move about with reasonable ease. The majority of patrons enter the auditorium in a receptive mood, but they will quickly change if they stumble against a seat or have to blunder about in the dark. It should be possible for an usherette to be always just at hand to guide every patron to a vacant seat.

4. HEATING AND VENTILATION

Perhaps the most important item under the heading of patron comfort is the heating and ventilation equipment, which embraces so many types of electrical and mechanical apparatus, from the simple to the complex.

Whatever the form of boiler or firing appliance or whatever fuel is used, fundamentally they all serve the same purpose, which is to raise the temperature of the auditorium and foyers to a comfortable degree whereby the patrons feel, during the winter season, that the atmosphere is warm and therefore inviting, and that comfortable climatic conditions are assured while they witness the motion-picture presentation.

Air Intake

Fundamental requirements of any ventilation system are the regular removal of vitiated air and introduction of fresh air without discomfort to, or indeed appreciation of that fact by, the audience.

Regulations usually require an amount of 1,000 cubic feet of air per person per hour, and to introduce such a quantity of conditioned air into the auditorium is a problem in itself, since any discomfort that might be caused by draughts, brought about by the fast moving air, must be avoided. It is well known that the most susceptible portion of the human body, when normally dressed, is the back of the neck and the top of the head, so air inlets need to be placed carefully with these facts in mind. In order to avoid draughts a slight internal pressure is maintained by extracting only about 75% of the air intake.

Whatever the extent of the installed plant, it follows that efficient and intelligent operation will have a considerable bearing upon the degree of comfort experienced by the audience.

When a kinema has the advantage of being equipped with an air washer this should be in operation whenever the air intake fan is working, for this procedure goes a long way to slowing down the inevitable deterioration of the decorations and furnishings.

Temperature Control

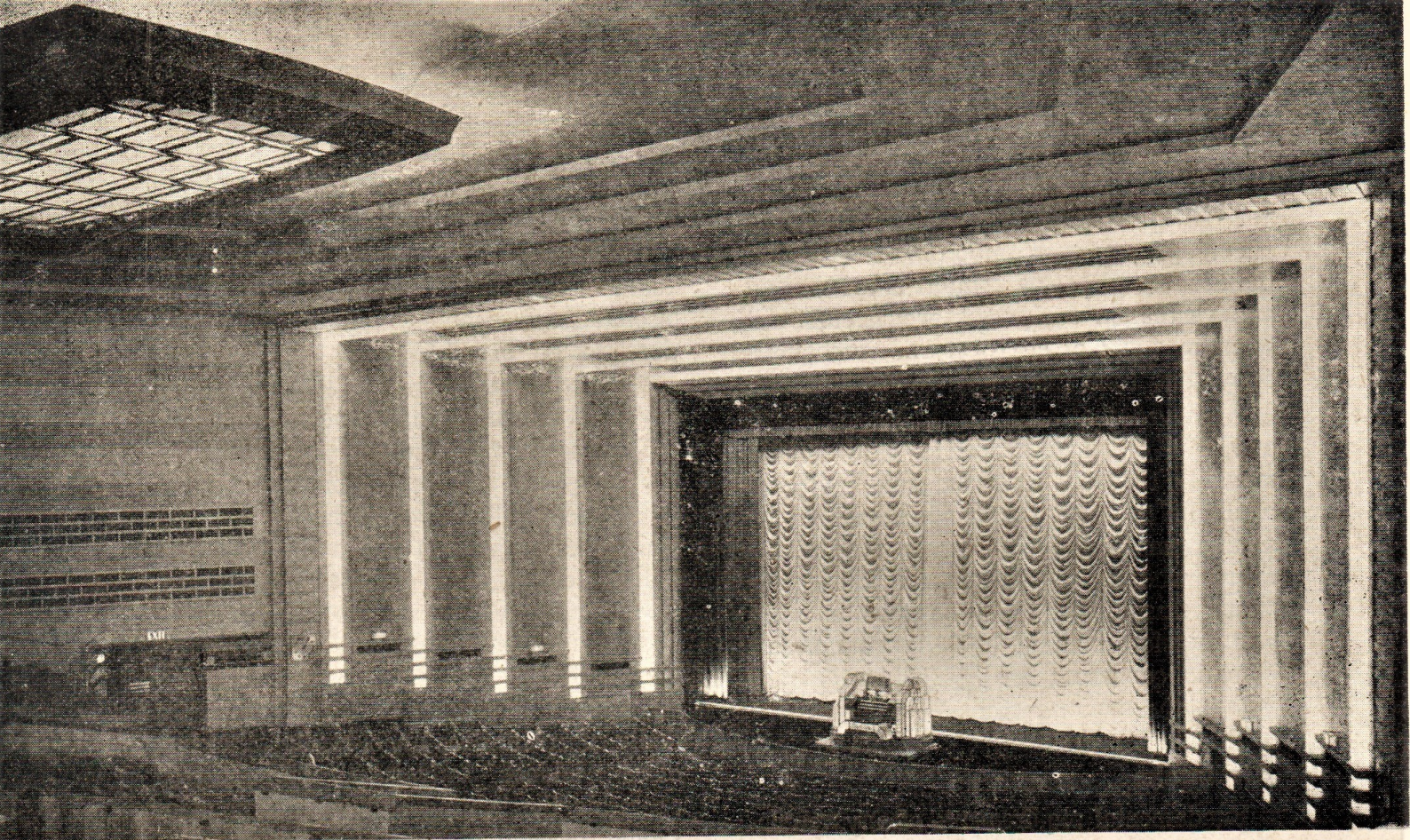
The air washer also assists during the hot weather in producing a cooling effect on the incoming air, enabling comfortable conditions to be maintained in spite of high outside temperature — another important aspect of patron comfort and attraction.

Climatic conditions within the auditorium have a tendency to vary over short periods of time, depending upon such factors as the number of persons in the auditorium and sudden changes in outside temperature. These sudden variations can be smoothed out by intelligent operation of the equipment, thereby assuring patron comfort, especially that of the elder patrons, for a badly run plant does undoubtedly affect box office takings adversely. The person operating the heating and ventilation plant should develop his sense of weather consciousness and be able to anticipate changes in temperature, thus avoiding the necessity of drastic action that may have the apparent effect of draught.

Requirements of Heating Plant

Naturally, the extent of the heating and ventilation plant varies considerably over the range of kinemas, and in the older buildings consists generally of radiators for heating and extract fans for ventilation. With such installations fresh air is usually drawn from the outside of the building through the doors or through air vents behind the radiators, and as such air is usually cold, it often causes discomfort to the patrons seated near to the points of entry. In many kinemas regular patrons know these draught spots and avoid such seating positions, so it is found that certain seats are always unoccupied unless all others are filled.

The incoming air will follow the easiest path, which is generally through the doors, and while such doors can be covered by curtains to prevent draughts, this precaution nearly always adversely affects ventilation through reduction of the air flow. Further, radiators are comparatively slow in action and cannot readily cope with a rapid rate of ventilation, and, of course, difficulty arises in adjusting radiators to compensate



An Auditorium with well-balanced Proscenium and attractive Lighting.

for sudden changes in atmospheric conditions.

If the entrance foyers are kept warm, discomfort from cold draughts can be reduced considerably, especially if the main entrance doors are kept closed as much as possible.

Air Velocity

The larger and more modern kinemas are generally provided with plenum systems designed to allow rapid ventilation and to reduce draughts to a minimum. Even with a plenum system, discomfort can be caused if the incoming air is not maintained at the right temperature, for the air in the auditorium moves at a rate which is four to six times as fast as that to which patrons are normally accustomed in a sitting-room, office or shop.

The temperature of the air passing through the delivery grilles should, therefore, approximate that required inside the auditorium, bearing in mind the adjustment necessary to compensate for the difference between a full and half-empty auditorium. If the air being introduced is too warm, then almost as much discomfort can be caused as if there were cold draughts, so this point must be watched, and thermometers are

generally positioned at strategic points within the auditorium, so that temperatures may be constantly checked.

Some kinemas are equipped with thermostatic control applied to the air heating plant, and in some instances to the boilers also, and thus a certain degree of automatic regulation is achieved, but the plant still cannot be left to look after itself.

5. FURNISHINGS

Patrons spend a long time seated in the auditorium, and while it is hoped that during the major portion of that time they are blissfully unconscious of their surroundings, there are times when they become acutely conscious of seating comfort.

Seating Comfort

Adequate seat spacing is a factor in comfort, and in enabling reasonable ease of movement between rows. Conventional spacing lies between 30 ins. and 36 ins., but adoption of the latter figure could, of course, mean an appreciable loss of seating capacity. Some compromise between maximum degree of comfort and practicability has to be arrived at, generally depending purely upon local conditions. Over-

emphasis can be placed on the importance of seat spacing, as statistics tend to indicate that patron disturbance in the average kinema running continuous performances is not nearly as high as might be imagined.

Considerable investigation has been carried out on the characteristics of the human body when seated, which has resulted in an available range of seating covering maximum comfort related to degree of cost. Sitting space is more important than passing space, and seat design is not a simple matter as it might at first appear.

Floor Coverings

Carpeting in a kinema is a further factor adding considerably to a feeling of comfort on the part of the patron. Everybody likes to walk on a carpeted surface that is resilient, giving slightly to the feet, and thus promoting a sense of luxury. Colour and design have an important bearing on this feeling. A good carpet deserves a good underlay, for not only does this add to the feeling of luxury, but it has a decided effect in slowing down the rate of deterioration. The acoustic properties of the floor covering must be borne in mind.

Design of carpeting in gangways and foyers can have considerable effect upon the safety factor and the ease of operation in handling a continuous two-way traffic.

Aesthetic considerations are not the only considerations, however, for durability of appearance and structure must be taken into account if the carpet is not to wear unduly and, therefore, become unsightly if not hazardous.

Care and maintenance of carpet then become of paramount importance if the original aesthetic and practical requirements are to be preserved, and involve a due appreciation of the correct technique in cleaning.

The fact that the decorative features and carpeting of foyers have a distinct appeal to the feminine section of the audience should not be lost sight of.

Wet-weather Precautions

One of the mixed blessings of the exhibition side of the industry is wet weather, for

while it brings in extra patronage, it also brings in water and mud, both enemies of a clean and cheerful atmosphere. Anything that can be done to ensure an immediate feeling of warmth and comfort to patrons entering the kinema from wet weather conditions should certainly be given due attention.

The entrance foyer or vestibule is the part of the theatre most affected by wet weather, and here, grooved mats or floorings by the entrance doors can do much to take dirt off the shoes of the incoming patrons and disperse the water that is shed from shoes and clothing.

While, for many reasons, opinion varies considerably on the type of flooring most suitable or desirable for the needs of the kinema vestibule and foyers, terazzo and marble are accorded high places in most minds for their durability and attractiveness through the infinite variety of design. Others however prefer a softer flooring such as rubber, which when laid properly is both durable and capable of effective range of design.

The appearance of a floor has much to do with its attractiveness and is again a matter of proper care and maintenance.

6. STRUCTURE

There is little need to stress the important part that the actual structure of the kinema fills in catering for the comfort and enjoyment of the patron. Lay-out of auditorium, entrance foyers and exits in any particular case soon make themselves felt in the ease of operation.

The kinema of today is a complicated structure of considerable value, calling for constant care and maintenance from the structural point of view to make sure that the causes of deterioration may not ultimately lead to the lessening of patron comfort.

For thousands of years mankind has searched in vain for materials for buildings that would not deteriorate or decay with the passing of time. Since nothing on earth has a permanent nature, wind, rain and air, containing natural chemicals as well as man-

made impurities, contribute to the slow but inevitable deterioration.

7. CLEANLINESS AND MAINTENANCE

Cleanliness is known to be next to Godliness in the projection suite, but this maxim should apply equally well in the kinema generally. Obvious cleanliness goes a long way to promote comfort and to create a good impression on patrons visiting that particular kinema for the first time.

Cleanliness also helps to maintain the furnishings and decorations in good condition, thus enhancing the appearance of the auditorium and foyers.

It is the engineer's job to provide adequate cleaners' lights and mechanical aids to cleaning, such as the permanent vacuum cleaning plant which is to be found in many kinema theatres.

Maintenance of Equipment

It would not be reasonable to conclude these remarks without reference to maintenance of structure, furnishings, and plant as having an indirect but very definite bearing upon patron comfort and enjoyment.

In a place of public entertainment a fault is always very obvious and sometimes magnified into a disaster. Perhaps the screen will suddenly go blank, the sound reproduction becomes a faint or intermittent whisper, perhaps it is a lamp here or there that has failed and not been replaced, a section of the neon lighting out, or a hundred-and-one other things.

Prevention has always been better than cure, and while a fault may be corrected in the minimum of time, and everybody concerned indulge in a bout of self-congratulation, it would have been a lot better if the fault had never occurred.

Statistics prove beyond all possible doubt that regular and thorough maintenance of equipment would have prevented over 70% of the faults that lead to patron annoyance. Further, the amount of money spent in re-

pairing equipment that has been misused or neglected would go a long way to the provision of more comfort and enjoyment to our patrons which in itself would have resulted in a considerable increase in the number of patrons visiting the kinema theatre.

It is impossible to over-emphasise this point of adequate and regular maintenance, which, coupled with intelligent operation of the many different equipments to be found in the kinema theatre, results in trouble-free presentation of high standard.

8. CONCLUSION

In some cases nearly three hours motion-picture entertainment is provided for the patrons, and if they are to be encouraged to turn always to that particular form of entertainment, then they must leave the kinema theatre with a sense of satisfaction, relaxation and complete enjoyment, not with a feeling of frustration through experiencing petty annoyances and minor irritations.

The authors hope that this review will serve to indicate the many facets of motion-picture presentation, the hundred-and-one items that must all receive due consideration and not be dismissed as trivial. The line of least resistance is so tempting, and unless the full number of pieces of the jig-saw puzzle are placed correctly there will be no picture in its completed form. Perhaps this review will inspire those connected with the final act of motion-picture presentation to give of their best for even better patron comfort, service and enjoyment in the cause of "Better Business."

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DISCUSSION

Mr. BRADLEY: What type of screen is considered the best for improving picture illumination?

Mr. PULMAN: One has to consider the type of auditorium. Experimental work is being carried out in regard to types of screens that will show the picture where the audience is seated, and not on the ceiling or in the orchestra pit.

Mr. R. H. CRICKS: The Americans have discovered recently that the rounded corners to the screen have a psychological advantage over square corners. The film frame has rounded corners.

Mr. SWINGER: I do not agree that the Americans have found it better to have rounded corners. We have decided in this country that the 90° angle of masking is correct. The round corners on the film are not very prominent.

Mr. A. R. RANDALL: Have the authors any views on the practice the Americans are attempting to institute, whereby they have fixed houses for showing a particular film?

Mr. SWINGER: The industry has fostered the continuous programme almost since its inception; habit takes a considerable amount of breaking.

Mr. R. BROMHEAD: I think this paper is most opportune, at a time when the whole industry is trying to work together—to remind us of those elements of showmanship and good service to patrons which there has been such a regrettable tendency to forget over the past years. In the war years it was quite impossible to pay attention to the many important facets of patron service, and

although the war has been over for five years, unfortunately the exhibiting industry as a whole has not gone back to them again. I should like to acquire a good many copies of the paper to see that they are properly distributed. Only if we give patrons enjoyment and relaxation can we rely upon them to come regularly to our kinemas.

A questioner mentioned the tendency in America to try to insist that people should come at the beginning of the picture. This policy has been withdrawn owing to opposition from exhibitors.

Mr. BAYNHAM HONRI: Not much was said about the most vital part of the projector, the Maltese cross. The Maltese cross and sprocket have come to be a standard, largely because of the variation in the shrinkage of film. Recent experiments we have been making in the studio may be a pointer to things to come. Nitrate prints are not sufficiently stable, but we find with the new safety base that prints straight from the laboratory will run perfectly satisfactorily on the B.P. projector. The fact that safety base does not shrink so much as nitrate might have an effect upon the policy of projector designers.

Mr. PULMAN: We on the engineering side feel that safety base is going to help us in every way, not only from the point of view of regulations but also from the mechanical point of view.

Mr. W. S. BLAND: In the present standard of screen illumination the limits set are so wide that

it is impossible to produce a print which is going to give reasonable results over all projection conditions. Until the limits are closer, I do not think the halls are ever going to be encouraged to improve their illumination, and we shall get a very bad discrepancy from one place to another.

In regard to screen masking, the standard does actually show a rectangular opening with round corners if required.

I am particularly interested in the sound level of news-reels. So often news-reel dialogue comes over much too low. One possible reason is that the dialogue of news-reels is recorded considerably louder than that of features, because it is declaimed somewhat, and therefore it should be louder than the normal spoken dialogue.

Mr. PULMAN: I think any motion picture engineer would agree that the present standard of screen illumination is very wide.

In regard to the third point, the good projectionist will obviously use his intelligence in order to compensate and produce the best possible level. News prints are very variable, and I do not think that most projectionists alter the fader unduly.

Mr. BUCKLE: Is it not a fact that news-reels are recorded at a high level? The average programme is run at a fader setting of between 5 and 8; we find by experience that a news-reel can be run on 3, and still give quite an audible response.

Mr. SIMPSON: Copies vary considerably in density, and no matter how much screen illumination we give, we are handicapped by the copy.

The majority of cinemas in this country are without adequate heating and ventilating. In America there is no smoking. They are viewing a copy in the best of conditions, as in the studio.

Mr. PULMAN: Until we provide a fairly close range of screen illumination, production and laboratory people cannot grade prints according to our wide variation. Considering this, they turn out prints that are very good. It is the exhibiting side that needs to get screen illumination tightened up.

Mr. L. KNOPP: I was a member of the British Standards Committee that prepared the recommended standards for screen brightness. The Committee comprised a number of skilled observers who determined the limiting levels of illumination which, in their opinion, were acceptable. The Committee was not influenced by current practice nor by the equipment at present in use. It is interesting to note that another similarly constituted Committee working in America without either liaison or collaboration with the British Committee, determined the same limits of brightness. Mr. Pulman now considers that the limits should be narrow, and it may well be that when the standard of discrimination of the cinema-going public has improved, the British Standards' re-

commendations will require to be modified accordingly.

Mr. SIMPSON: A number of productions have night scenes and other dark scenes. In a first-class hall you may have no difficulty, but in a hall in an industrial area, where you have a lot of fog and bad atmosphere, it is well-nigh impossible to see the picture at times.

Mr. W. LASSALLY: It is surely to be deplored that any changes should be made on the production end, from the point of view of night scenes, by reason of the bad conditions in certain halls.

Could not some electrical interlock be produced which would prevent the colour floods being on the screen at the same time as the projector?

Mr. SWINGLER: The screen curtains may be coupled with a trailer dimmer, to dim the stage lights slowly at the same time as the screen tabs opened. From the presentation point of view, I consider that bad, because it encourages the certificate being shown on the screen tabs. Showmanship, as I—a mere engineer—know it, does not stop with merely dimming lighting on the stage and presenting your film. Showmanship is a combination of art not only of the studio technicians and of the laboratories, but of the people who are responsible for presenting the finished product to the patron. Colour in itself forms part of the entertainment. One must therefore have the opportunity of lighting the stage and/or the curtains and be able to vary the colour combinations. It is impossible to do this when one has a trailer dimmer attached to the curtain motor.

In my opinion, it is psychologically incorrect to look at a picture which is surrounded by 3 ft. of black border.

Mr. S. A. STEVENS: One point about the loss of illusion that neither speaker raised is the visibility of the beam of light from the porthole to the screen. As long as we have front projection, and as long as we go on smoking, it seems that we must have this feature. The Theatre Division is presenting a paper on the subject of rear projection, in which the beam of light is on the other side of the screen.

A VISITOR: All advertising material should be kept off the screen, apart from the trailer giving next week's programme.

Mr. SWINGLER: Speaking of the organisation in which I am employed, 99 per cent. of our theatres do not show slides; we use 90 per cent. Technicolor trailers. Nobody objects to a clever advertising short.

Mr. W. V. DEWAN: Will the day ever arrive when we can increase our screen illumination and match the density of our prints, and so do away with that evil, the usherette's torch?

Mr. PULMAN: The answer is yes.

