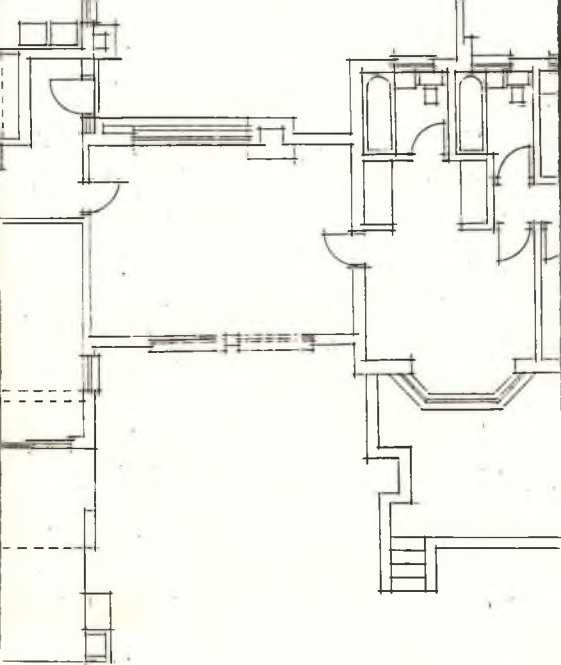




**SOUTH AFRICAN
ARCHITECTURAL
RECORD AUG 1940**



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THE SOUTH AFRICAN ARCHITECTURAL RECORD

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TWENTIETH CENTURY CINEMA JOHANNESBURG

ASSOCIATED ARCHITECTS:

COWIN AND ELLIS, HANSON TOMKIN FINKELSTEIN

THE TWENTIETH CENTURY CINEMA

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COWIN AND ELLIS, HANSON TOMKIN FINKELSTEIN

The site chosen by the promoters of this building programme faces two streets and measures 150 x 100 Cape feet. What was required was primarily a cinema to hold approximately 2,000 people and a tall block of showrooms on the main frontage with shops on the ground floor. These showrooms had to be 20 feet deep, so that the width of the cinema was limited at the outset to the remaining 80 feet. The architects found that this accommodation, with the necessary services, exits, etc., filled the site completely. Thus, as far as attempting to give articulated expression of the principal elements was concerned, they were faced by a "fait accompli." I need hardly add that the fact that foyers and entrances were expected to be spacious, that the seating within the auditorium had to be generously spaced, and that Municipal requirements and restrictions had to be adhered to, all imposed further limitations on the architects' imaginative approach. Within these limitations, however, the architects have attempted to achieve a solution in terms of an established contemporary rationale.

Though the shops had to be placed on the main frontage, nevertheless it was imperative to locate the entrance to the cinema on the same side—so that a main entrance on the corner of the site was clearly indicated. The entrance doors and double-volume crush-hall at this point represent the overlap of the cinema proper and the showroom block, which is, in other respects, a clearly expressed separate entity. The auditorium, with the foyers, cloakrooms and exits linked with it, fills entirely the remaining portion of the site.

The demand for maximum seating did not permit the side walls of the auditorium to be splayed—the correct solution for proper vision. Instead, a wide parabolic curve was given to the screen end—an effect which closely approximates that achieved by splaying. The shaping of the auditorium volume was conditioned by five factors. These were:

1. The proscenium design;
2. Acoustic considerations;
3. Methods of lighting;
4. The air-conditioning system; and
5. The Wurlitzer organ installation.

Taking these five points in the order given. Firstly, the proscenium design. It was felt that full expression should be given to the screen itself—the predominant element within the cinema. Curtains, screen and minimum stage are contained within a concrete frame, standing free of the encompassing parabolic end wall and of the sloping ceiling above. This method of expression shows a clear differentiation from the treatment of stage and opening in a theatre, and suggests further developments in the direction of functional emphasis in the cinema. The widest aesthetic possibilities are apparent in this approach.

The second point—acoustic considerations. These obviously condition the form and treatment of walls and ceilings. Careful consideration has naturally been given to the problem of good sound reproduction within the hall. The general lines of the ceiling have the correct directional relationship to the loudspeakers mounted behind the screen, while they also take into account the lighting and air-conditioning systems. Above the proscenium frame a perforated ceiling has been suspended. This hard ceiling acts

FACADE TREATMENT

Use has been made externally of permanent materials requiring no maintenance. The theatre facade on the east consists of four elements, viz.:

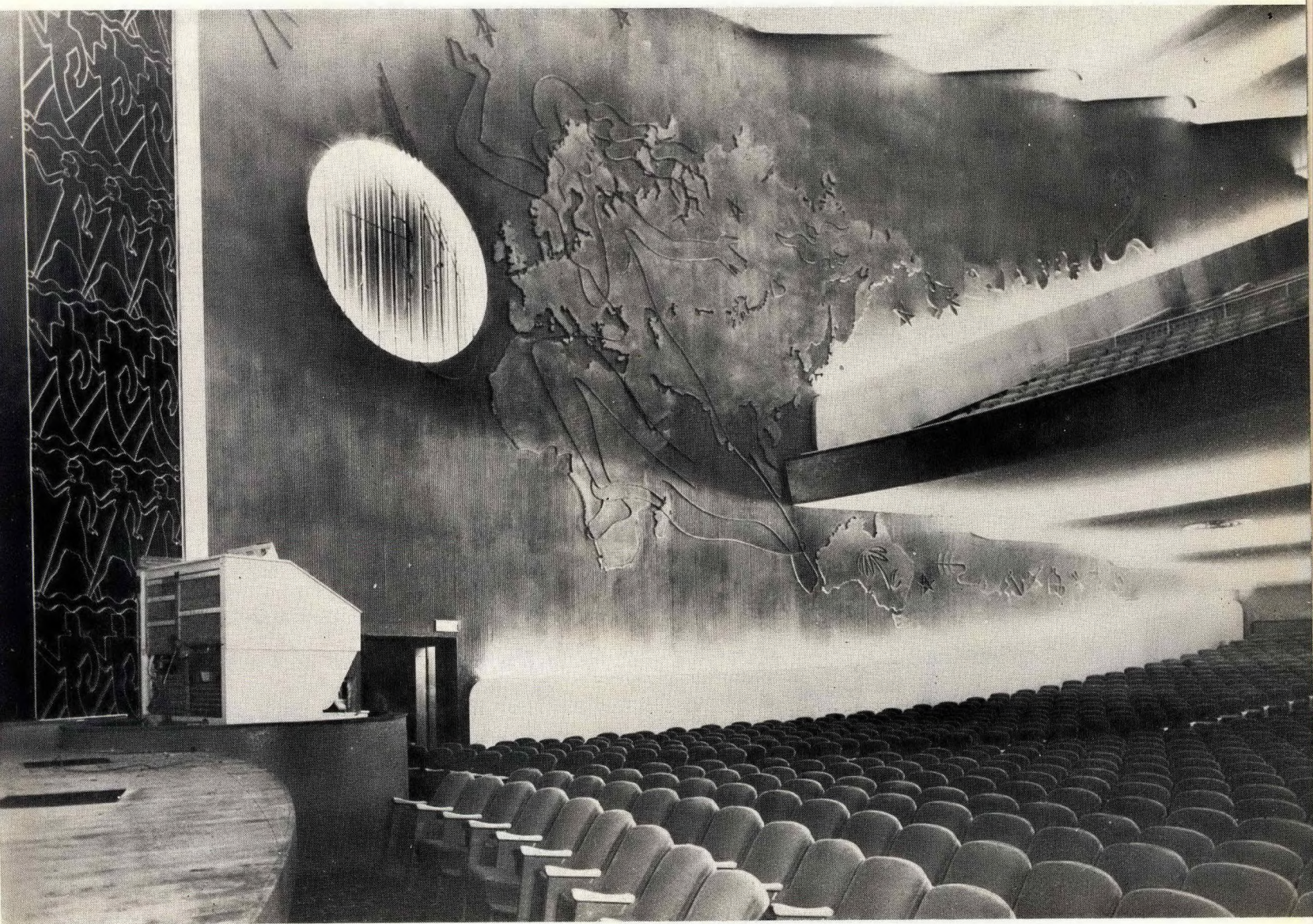
1. The ground floor, in which marble and plate glass have been used for the fixed portions, while the entrance doors are made of armour-plate glass.
2. The foyer level, where glass bricks and polished terrazzo have been used.
3. The plant and electrical distribution rooms level, where encaustic tiles have been used on the external facade and free-standing columns are finished in mosaic.
4. The gallery and projection room level has been faced in narrow iron-spot bricks.

The showroom facade on the north has been carried out in polished terrazzo with steel windows set in recessed bays of steel. The marquee consists of a reinforced concrete slab cantilevered from the building. The concrete parapet has been recessed to form a "forthcoming attraction" sign, in which illuminated glass letters are used. Use has been made of neon signs as integral parts of the architectural features of the building. These consist of a 40 ft. vertical sign on the north facade reading "Century" surmounted by 12 ft. high letters forming "20th." On the east facade the face brick is covered by a single-tube neon sign 35 ft. high forming the figure "20," whilst on a projecting concrete ledge are 30-inch high letters in stainless steel reading "20th Century."





SIDE WALL OF THE AUDITORIUM



The auditorium is illuminated by a series of concealed lighting troughs in the main ceiling and in the ceiling under the gallery. Pilot lighting during performances consists of blue lights concealed in the wooden dadoes lining the sides of stalls and gallery. There are 1,182 seats in the stalls and 882 seats in the gallery, of which 266 are in the Royal

Circle. The first row of seats is 20 ft. from the screen. Seats in the stalls are light grey in colour and in the gallery flame. The form of the theatre is dictated by acoustic requirements. The narrowest width of the theatre is at the source of sound, namely, the screen, widening out to maximum width at the rear of the theatre. The slope of the ceiling at the

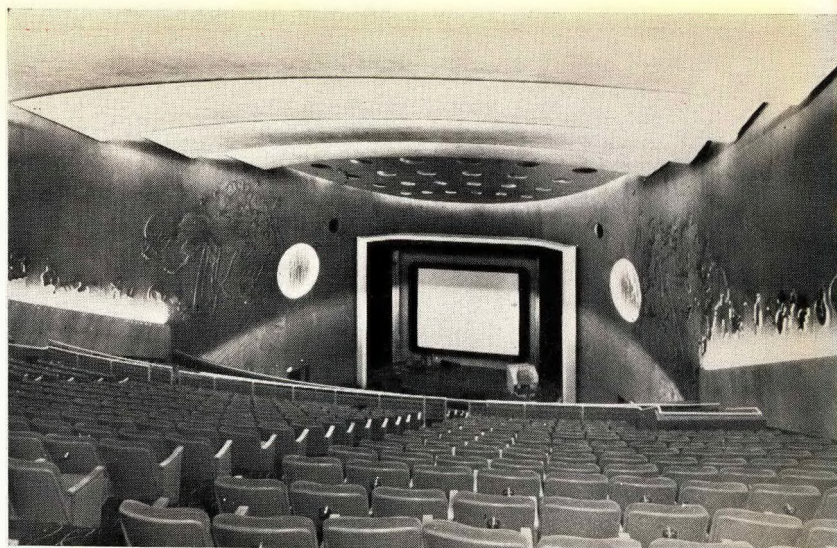
front of the theatre is set so as to provide a maximum area to reflect sound from the screen. The side walls are covered with sprayed limpet asbestos. The walls at the rear of the stalls and gallery are covered with Acousti-Celotex. The ceiling at the screen end is in fibrous plaster to reflect sound. The remainder of the ceiling is covered with sprayed limpet asbestos.

as a sound reflector, giving at the same time an essential lightness at the lowest portion of the ceiling. From the widest point of this platform the main ceiling extends back in successive sloping steps to the back of the gallery, each change in level being accentuated by the introduction of a trough for concealed lighting. The whole of these surfaces have high sound absorption qualities, achieved by the use of sprayed limpet asbestos in thicknesses adjusted to requirements. The side walls have a proper percentage of reflecting surface in the form of wood-panelled dadoes to stalls and gallery, and, for the rest, have been treated in various absorptive materials. Rear walls have naturally the highest percentage absorption, extensive use having been made of acousti-celotex, limpet asbestos and heavy curtaining. In the cinema auditorium, as in most modern halls, the problem is to damp excessive sound without losing or distorting essential natural qualities. Hence the importance of newly-developed materials in this connection—they play a part second only to correct shaping in giving successful acoustic conditions.

The third point—methods of lighting. Experiment in this sphere has shown that excessive lighting gives unfortunate results in a cinema. On the other hand, lighting must be evenly spread to all parts of the house. For that reason curved light-concealing troughs, spanning the width of the cinema, have been used for both the upper ceiling and the soffit of the gallery. The direction of lighting is in all cases away from the audience. The decorative value of lighting is here demonstrated in its simplest form, additional spatial effects being achieved at such points as the proscenium end, where the free spaces behind the top and side members of the frame are illuminated to give depth, or the maple dadoes, where the top edges contain reflectors to play on the wall surfaces above. All these elements are controlled by a most comprehensive dimmer installation in the projection room. Effects were, so to speak, designed from this amazing control point. In other words, lighting is an integral function within the cinema, and creates dynamic qualities often denied to purely architectural elements.

The fourth point—the air-conditioning system. The discharge of conditioned air has been studiously directed away from the face of the audience. At the loftiest point of the main ceiling the air is sent at high velocity through outlets situated in the light troughs—the direction being towards the screen. Extracts at the rear of the stalls and at the upper gallery diffuse and pull back the air gently towards the audience. Where the ceiling is too close to the seating (under and at the back of the gallery), to

The stalls foyer is reached by a short flight of three steps from the vestibule. The dominant architectural feature of the foyer is a display for forthcoming attractions. This consists of a diagrammatic representation of a movie camera, the spools of which are illuminated by concealed lighting and in which scenes from forthcoming films are featured. An elaborate strip of illuminated film at the top of the display contains the permanent lettering "Forthcoming Attractions." Opposite this is a large plate glass window on the pavement line through which the foyer is visible. A concrete flower box, covered with white rubber, is placed below this window. The colour scheme is grey ceiling, bronze painted walls and wine-red carpet. The floor is covered with carpet specially designed by the architects. The motif is "20th Century" incorporated as a pattern. The carpets are of Wilton weave and were specially manufactured in England. The foyer is illuminated by means of a concealed lighting trough running along two sides of the ceiling. On the first floor the main lounge is the circle foyer, the outstanding feature of which is a large pool in which water plants have been introduced. The pool is illuminated by means of under-water floodlights, while on the side opposite to the guard rail is a marine scene sandblasted on a mirror running the full length of the pool. Illumination is by means of concealed lighting troughs along the edges of the ceiling. The furniture consists of banks of lounge chairs upholstered in grey mohair and constructed of olive ash. These are set between free-standing columns ducoed bronze. The colour scheme is grey upper ceiling, powder-blue lower ceiling, ivory walls, bronze columns, grey-upholstered furniture and wine-red carpets.



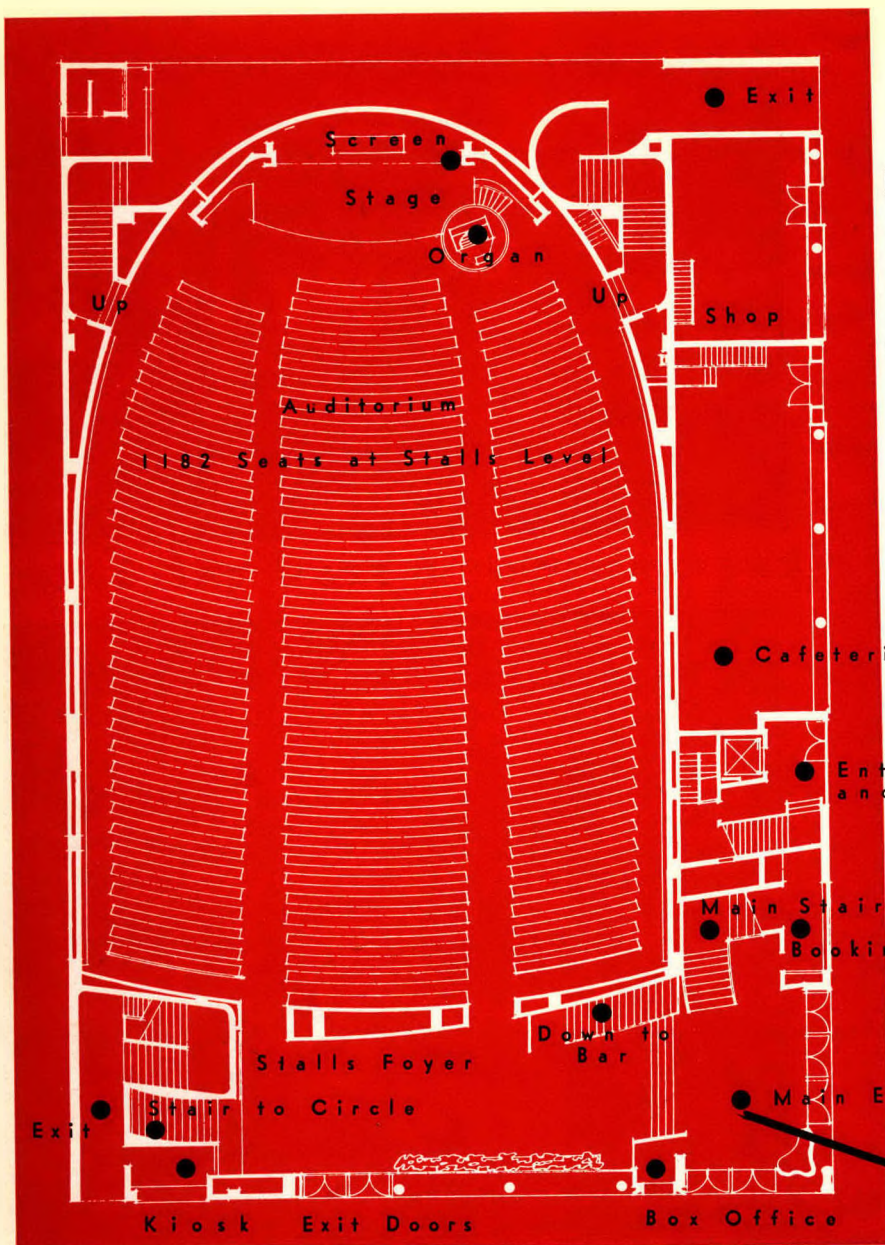
THE AUDITORIUM FROM THE GALLERY



THE STALLS FOYER



THE MEZZANINE FOYER



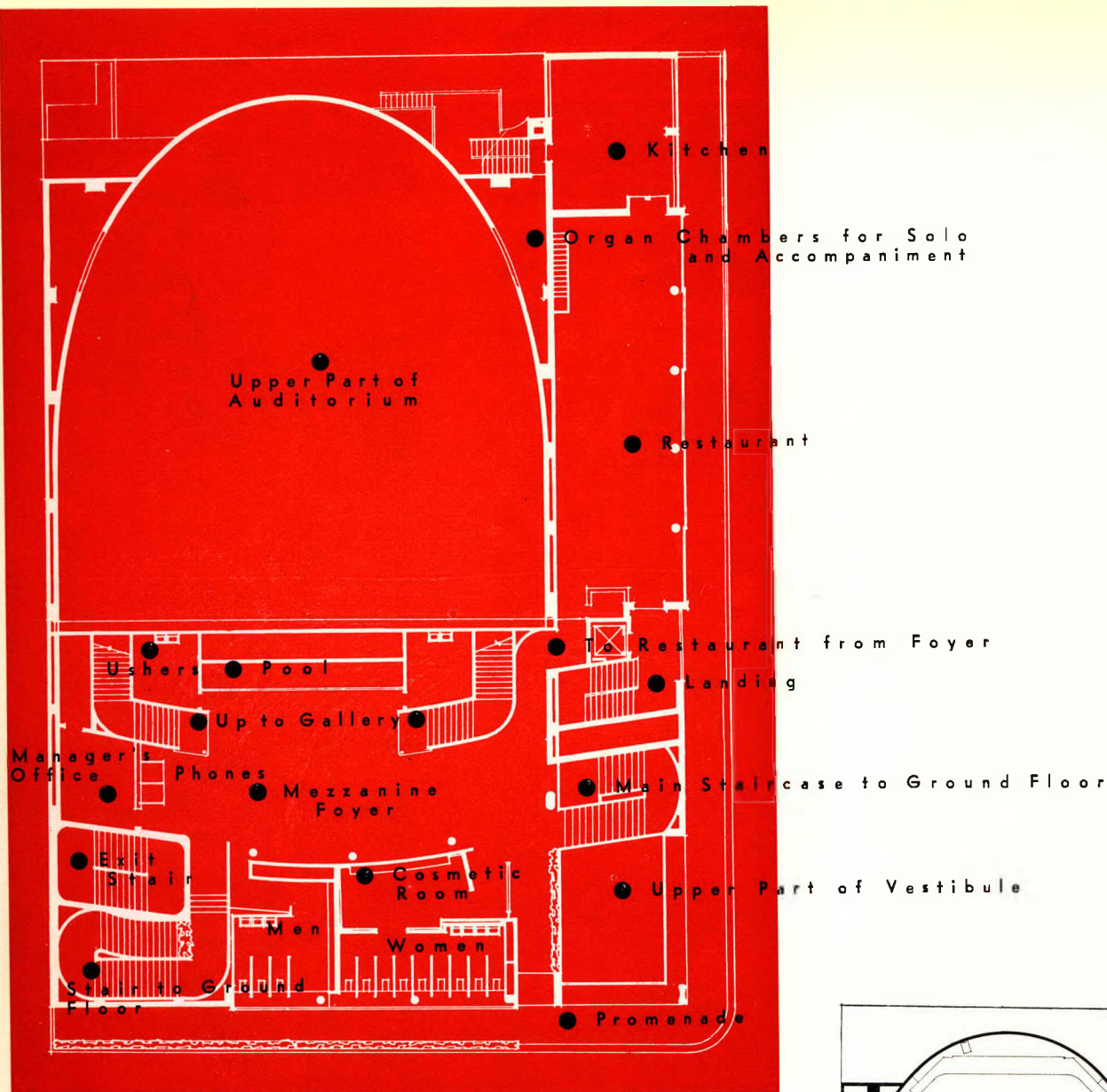
PRESIDENT STREET

VON BRANDIS STREET

THE GROUND FLOOR PLAN

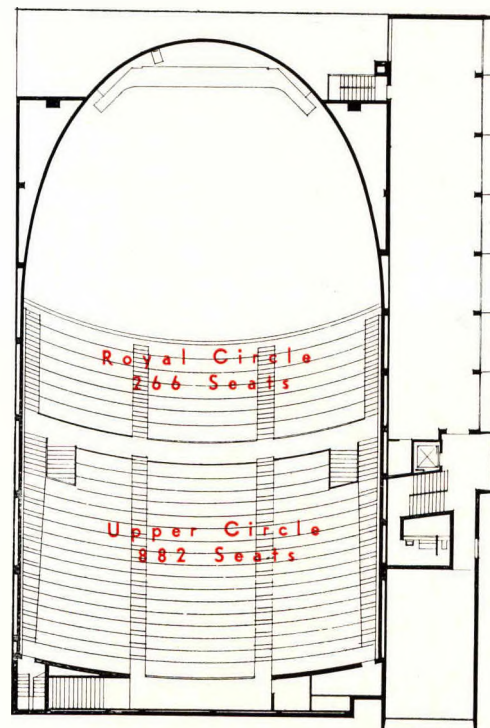
The focal point of the double-volume vestibule is the main staircase in reinforced concrete. The main support to this staircase is derived from a slender V-shaped chromium plated column. The staircase is faced in marble, the treads being of Napoleon Tigre and the risers of Italian stallatite. The balustrade to the staircase is formed of Georgian wired glass, with polished edges. Indirect light fittings are suspended from the ceiling. The handrailing is ducoed ivory colour. The colour scheme consists of a powder-blue ceiling, a bronze wall on the west side of the vestibule and a wine-red wall on the landing of the staircase. The marble facings to the walls of the vestibule are dark brown Italian stallatite. The floor of the vestibule is laid in squares of Napoleon Tigre marble.





MEZZANINE FLOOR PLAN

The proscenium is 45 ft. wide and 34 ft. high. The maximum screen size is 25 ft. x 18 ft. 6 in. No stage shows. The projection room measures 40 ft. x 13 ft. 3 in. (average width). The generator room is on the same level as the projection room on the south side. The rewind room is also on the same level but on the north side. Toilet and washroom is provided for the use of operators, leading off the rewind room. The walls of the projection room, to a height of 5 ft., are painted a dark green colour. The upper portion of walls and ceilings are painted light green. The walls, floor and ceiling of the projection and auxiliary rooms are of concrete. The angle of projection is $21^{\circ} 12'$. The projection throw is 136 ft. The size of the screen image is 25 ft. x 18 ft. 4 in.



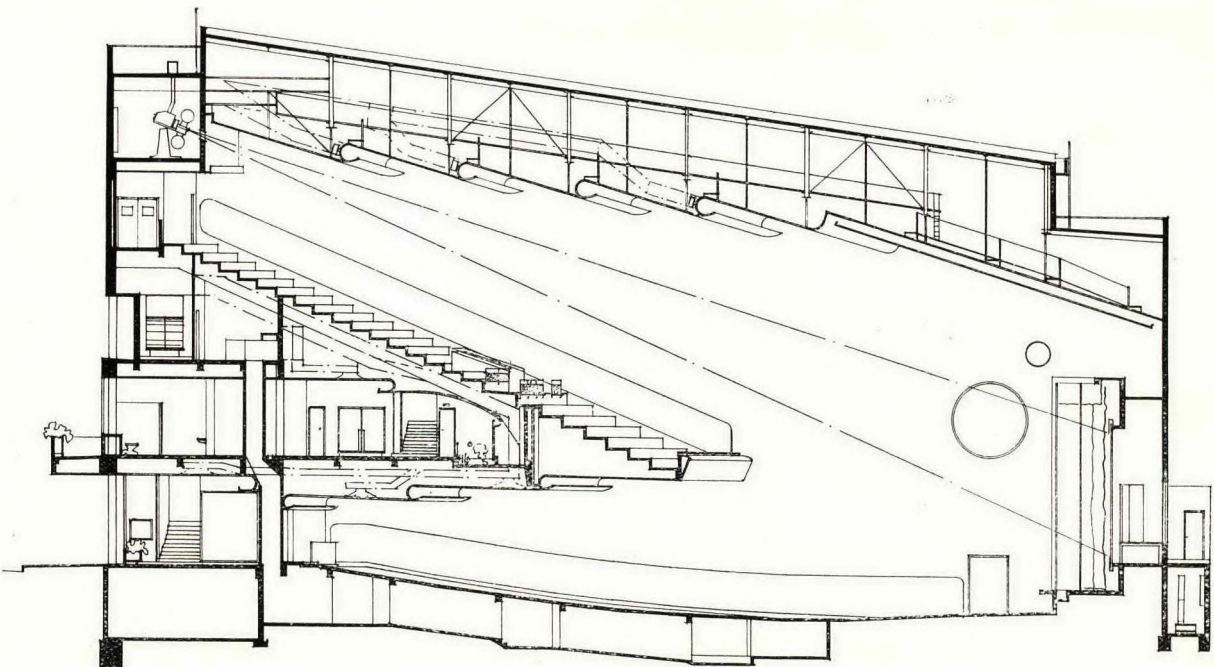
GALLERY AND SHOWROOM PLAN

employ this method, anaemostats have been introduced. These strictly functional outlets spread the air evenly without creating draughts—which is the essence of successful air distribution.

Lastly—the Wurlitzer organ installation. This elaborate four-manual installation—with its innumerable electrical connections, its blower and its solo and accompaniment chambers—manifests itself to the audience at three points. In the organ console itself in its cylindrical pit at the foot of the proscenium, and in the circular grille openings, one on each side of the proscenium. These three points receive their due accentuation when the Wurlitzer is in operation—but otherwise are not designed to obtrude when the screen is the focal point of interest.

These five factors thus inevitably shaped the auditorium—and it was left to the architects only to give scale, proportion and emphasis—with a success or lack of it that can be properly assessed by professional critics.

The system of structure is interesting mainly for its economy of reinforced concrete sizes and for its potential and actual speed of construction. Reinforced concrete has been combined with steel trusses for spanning the auditorium itself. The gallery is suspended on a framed steel truss 11 feet high. This in turn is penetrated by reinforced concrete rakers at 23 feet centres. These rakers cantilever over the stalls to support the lower circle. The roof—an insulated 4 inch concrete slab—rests on stepped steel trusses, thus giving a simply drained sloping surface.



Long Section showing Roof and Gallery Construction, Lighting System, Ventilating System and Floor Slopes



LEFT: Box office and entrance doors, Von Brandis Street

BELOW: Entrance doors, President Street



The projector unit is suspended from the last of these trusses. A false fibrous plaster ceiling is hung by means of steel suspension rods from the underside of the trusses—the intermediate space giving sound and heat insulation, as well as being available for ventilation ducts and for comfortable access to the ceiling light troughs.

In other respects the reinforced concrete frame is expressed as functionally and freely as possible. The projecting steel grid on the showroom elevation reflects the structural system behind—the spaces within the grid being filled by steel window frames glazed from floor to ceiling. The 15 inch diameter vibrated reinforced concrete columns which carry the eight-storey superstructure are freed on the ground floor, thus imparting rhythm and definition to the facade as a whole. It might prove of some interest now to discuss the character of the two facades. While the one gives a straightforward expression of its purpose, the other presented greater complexities to the architects. It was held that the entrance and foyer elements on the ground floor should be as light and as open as possible. Above this level, however, the character of the enveloping surfaces changes to that of screen walls. The functions to be handled



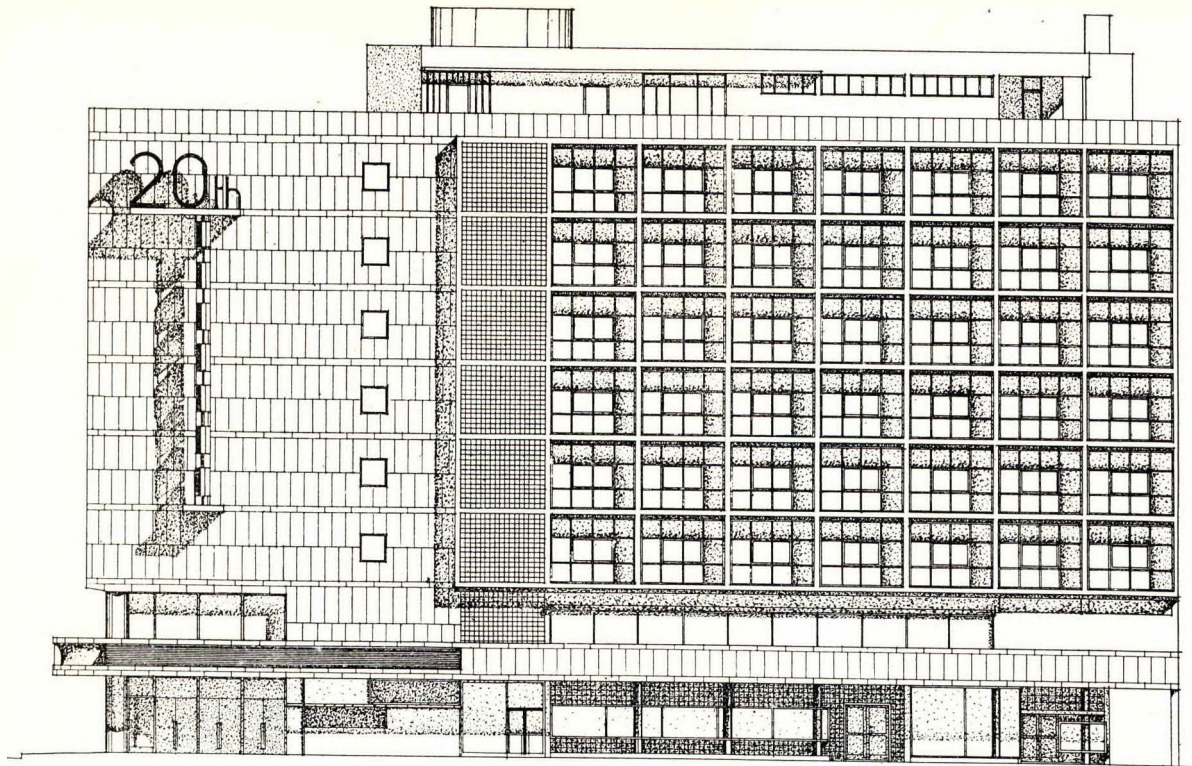
LEFT: Entrance vestibule and
main staircase

BELOW: Shop fronts, President
Street



are the cloakrooms, the air-conditioning and electrical distribution chambers, and the rear wall of the gallery with the projection unit above it. None of these demand direct lighting or ventilation from the street. One thing to be avoided was the dreary and falsely-accented wall treatment to be seen in so many cinemas. On the contrary, a note of gaiety is by no means misplaced—a quality difficult to impart, and not usually associated with what the uninitiated consider the austere lines of the contemporary architectural idiom.

However, in this case, the architects felt that by a logical use of materials and by some structural differentiation, much could be achieved. The dominating element—the rear wall of the gallery—has been faced in one uninterrupted mass of narrow bricks—used as a background for the decorative use of Neon lighting in suitable forms. The plant rooms, which could be set back from the building line, were expressed in a contrasting colour by means of matt glazed tiles—a very good impervious surface. At the first floor, opaque double-thickness glass bricks suitably screen the cloakroom entered off the mezzanine foyer. The effect, as a whole, of this facade has fulfilled the expectations of the architects. On the long facade simpler elements had to be handled. The showroom block is divided on each floor



THE NORTH ELEVATION

into two sections. One of these faces north and the other—the narrow end of the block—faces east, and is read in conjunction with the cinema proper. One point, however—the corner entrance to the cinema—had of necessity to be given due vertical accent on the long facade. This was achieved by means of an architecturally-conceived projecting Neon sign, supported on concrete slabs at two levels. As background to the sign, a broad wall (the side wall of the east showrooms) was surfaced with pre-cast white terrazzo slabs, 2 inches thick, and jointed to give scale and weight to the facade as a whole. The emphasis on the many functions for which the ground floor frontage is used is given by clear definition in two forms—either by the application of strong colour or by the contrast of many varieties of materials—ranging from marble to armour-plate glass. The circular and shaped columns are faced with terra-cotta mosaic and in the process do not lose their essential forms. The stalls foyer is made visible from the street by means of large plate-glass sheets set in light bronze frames, and this character is retained in the entrance and exit doors at this level. This is made possible by the introduction of armour-plate

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