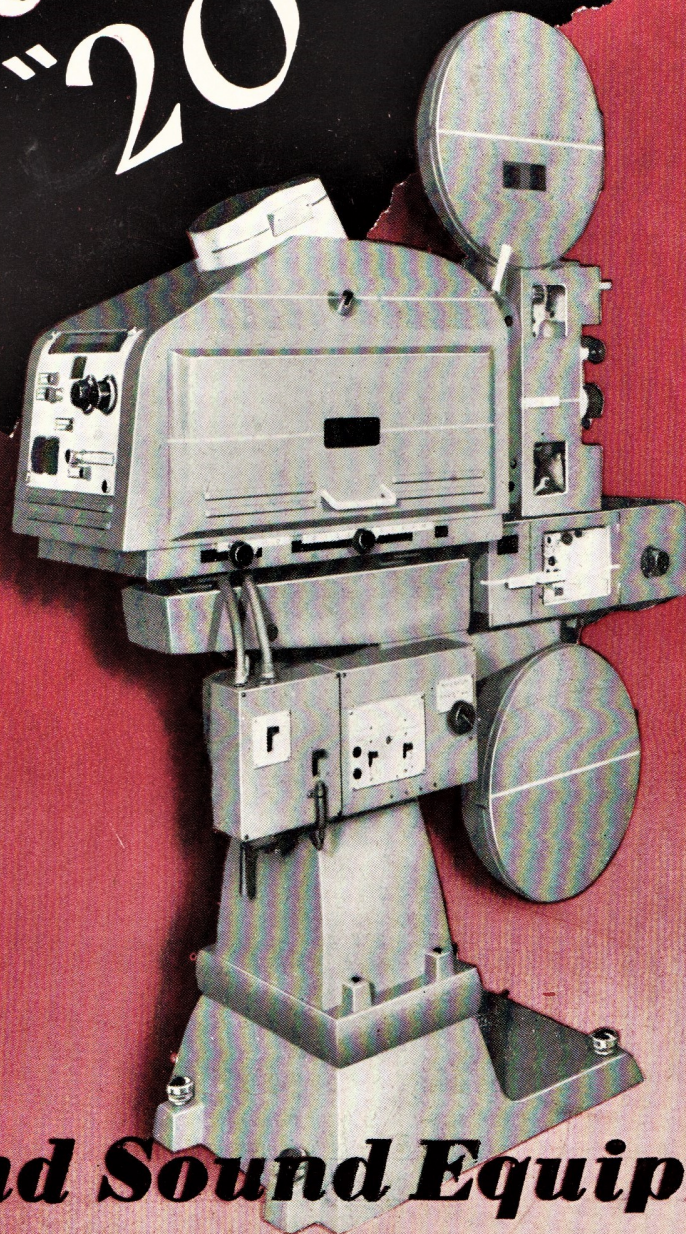
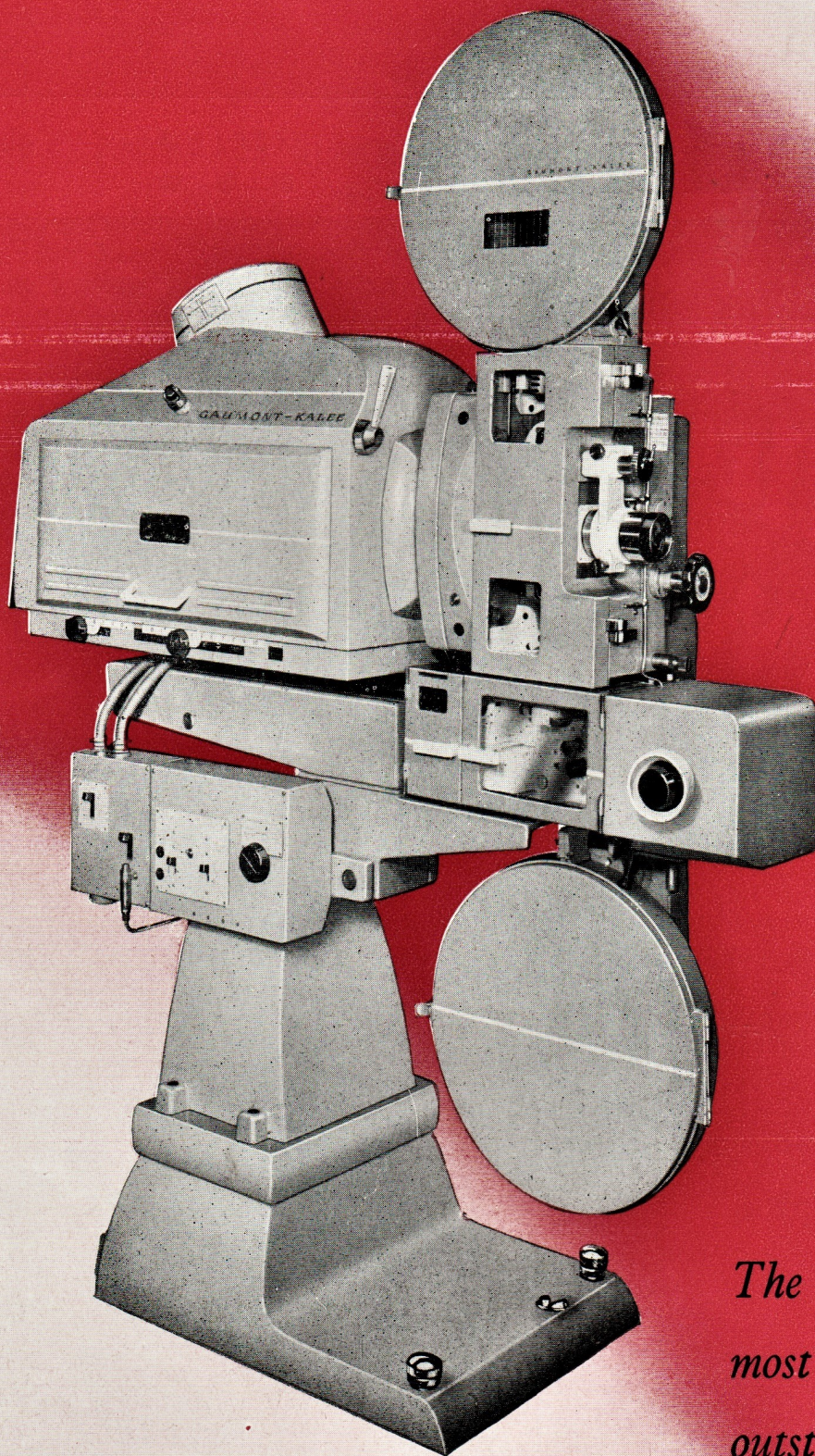


Introducing . . .

**...the new
GAUMONT-KALEE
"20"**



Projection and Sound Equipment



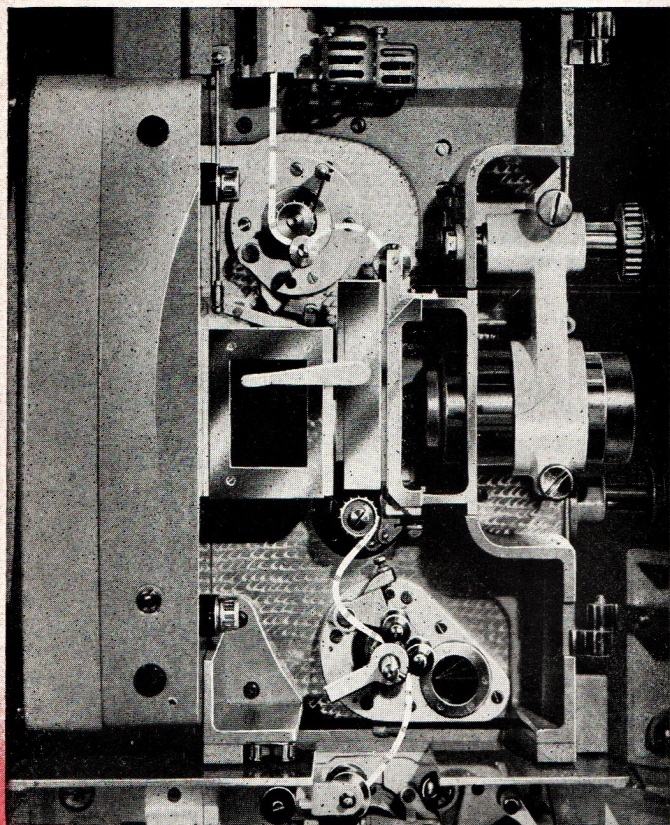
*The
most
outstanding*

PROJECTION AND SOUND EQUIPMENT

for Cinemas with a seating capacity up to 2,250

The Gaumont-Kalee "20" has been designed to meet the demand for equipment offering the same high standard of performance, dependability and accessibility which have been achieved in the famous Gaumont-Kalee "21" - **but at a much lower price.**

Precision in every detail has been the foundation upon which this new equipment has been evolved. Our long experience in projection and sound equipment design, together with the unrivalled resources of our technical research departments and our manufacturing facilities, have assured highest efficiency with long and trouble-free service.



The **PROJECTOR**

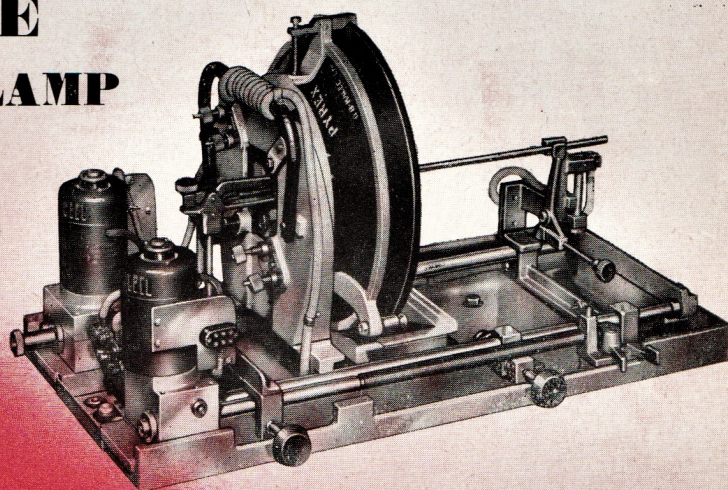
The Gaumont-Kalee "20" Projector not only embodies many of the main and proved characteristics of previous models of the world-famous Kalee machines, but incorporates several new and important features. The mechanism is totally enclosed with all mechanical parts running in an oil bath. A scientifically sprung adjustable tension, parallel gate, quickly detachable for cleaning, is incorporated. All main sections are built on the unit principle, readily detachable, thus permitting indefinite life. A rear shutter of the two-blade pattern provides for a very high standard of light efficiency without flicker. The position of the gate in relation to shutter and lens has been arranged to make full use of the new wide aperture Kalee colour - corrected "bloomed" projection lens. This Lens is of the latest design, having an effective

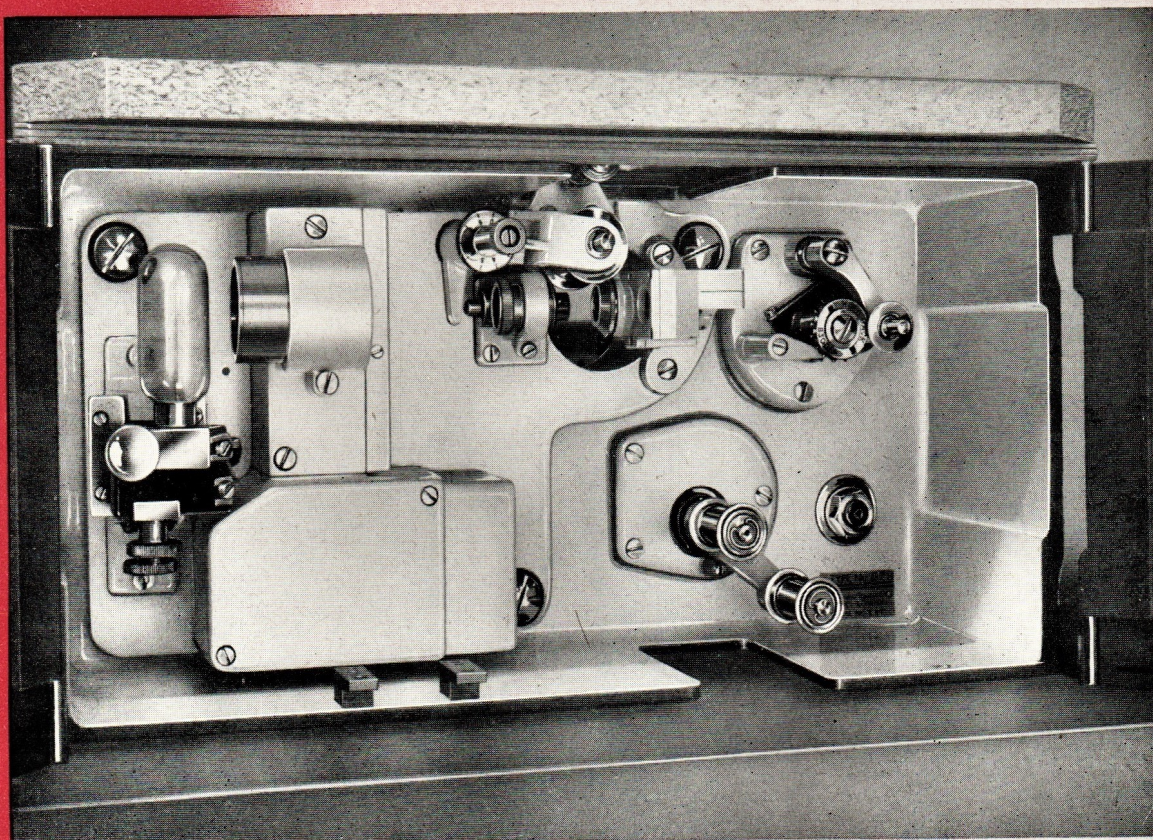
aperture of f 1.9, thereby passing the maximum amount of light, whilst the Kalee "bloomed" process ensures the correct rendering of high lights, shadows and half tones. Pressure rollers are self-sustaining in open position. Electrically operated picture changeover is incorporated with fire shutter and arranged for remote control. There is provision for the specially designed automatic "Pyrene" Fire Extinguishing Equipment as an integral part of the Projector when this optional equipment is ordered.

The **GAUMONT-KALEE** **"PRESIDENT" ARC LAMP**

Incorporates a 14" (355mm) elliptical, metal-sheathed mirror of special design to collect the maximum light output in accordance with the carbon combination and current used. A feature of this new Arc Lamp is the introduction of twin motors for the control of the positive and negative carbons, thus ensuring an infinite variable speed for each type of carbon used in order to maintain the primary focus so essential to even lighting of the screen. The Lamphouse is streamlined with access doors running the full length.

Automatic striking is incorporated with manual operation of both positive and negative carbon at any point of travel, without interfering in any way with the operation of the motors. The "President" Arc Lamp is arranged for the use of 18" (455mm) long positive carbons with specially designed carbon grips providing for the utmost carbon economy. A system of double dowsers fully protects the mirror in the striking position, and an optical system is provided which reflects the carbon image to the exterior of the Lamphouse.





The **GAUMONT-KALEE "20" SOUNDHEAD**

The Gaumont-Kalee Type 678 Soundhead used with this model employs drum scanning with fluid fly-wheel stabilizer; the scanning unit is shock-absorber mounted. Micrometer adjustment of film guide roller is provided. The film sprocket is isolated from disturbances originating from the bottom take up, or from a bent bottom spool, by a cushioning roller mounted on a spring loaded jockey arm.

The optical system of the 678 Soundhead is of the enlarged image type, in which the six times magnified image of the sound track, always visible on the scanning window, provides a constant visual monitor. This system, by virtue of the ease and certainty with which it can be maintained in correct adjustment, is preferable to the front scanning system previously employed in the Type 378 Soundhead.

The exciter lamp is of the standard 8 volt 4 amp type and the holder has a quick acting height adjustment to cope with variations in individual exciter lamps.

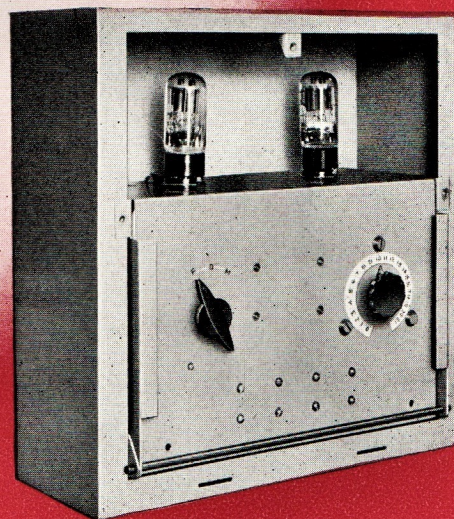
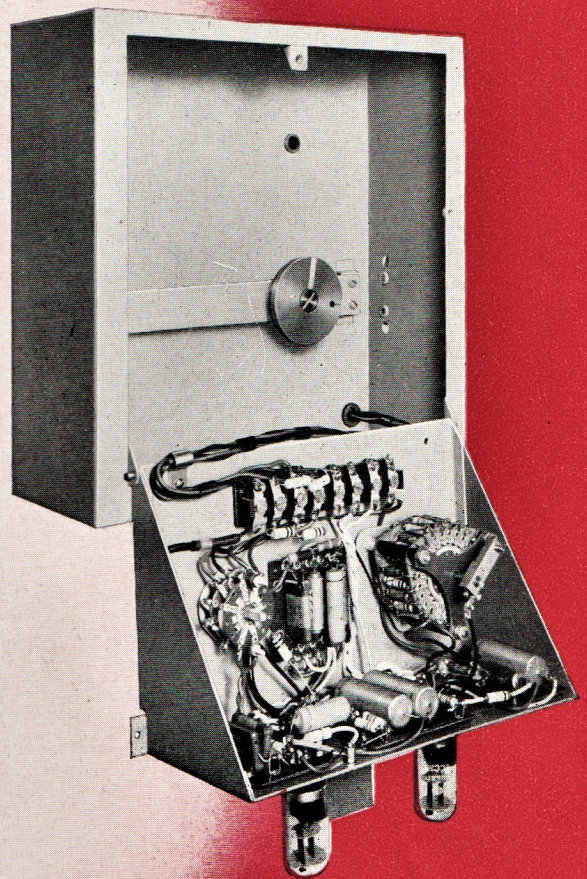
The drive from motor to soundhead is by short dual endless "Vee" belts, and motors can be supplied for operation from 40, 50 or 60 cycle supplies, in the range 95-130 volts, or 190-260 volts. Mechanical assemblies are standardized in interchangeable units, thus avoiding the necessity for part fitting, and thereby providing simplicity in maintenance.

The Soundhead is totally enclosed ensuring the utmost silence in operation. It is finished internally in hard porcelain white enamel, facilitating inspection and providing greater cleanliness.

The **VOLTAGE AMPLIFIER**

The voltage amplifier, measures only 12 ins. (30 cms) wide, by 12 ins. (30 cms) high, by 7 ins. (18 cms) deep. It is arranged for front wall mounting between the two projectors, a position which its small size greatly facilitates. Coaxial cell cables connect the two soundheads to the amplifier. The main volume control, of the 21-position, click-action type, and the film, disc, microphone switch, are incorporated in the voltage amplifier. Remote volume control at the second operating position is provided.

Immediate access to all the components and wiring of the amplifier is obtained by withdrawing two screws, which permits the whole chassis to tip forward through 180 degrees. The amplifier continues to function in this upside-down position.



The **MAIN AMPLIFIER**

The Main Amplifier is contained in a handsomely proportioned steel cabinet externally styled and finished in mid-stone and maroon in uniformity with the Gaumont-Kalee standard colour scheme, and contains :—

- (a) The Main Terminal Panel.
- (b) Main amplifier with push-pull output stage giving an undistorted output of 20 watts, with negative feed back applied over the last three stages. A separate output valve feeds the monitor speaker.

The mains transformer is wound for either 95-130 volts, or 190-260 volts.

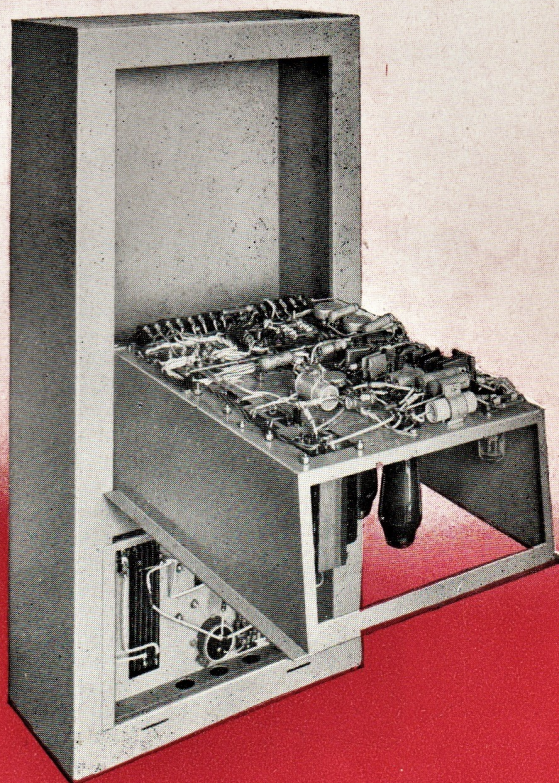
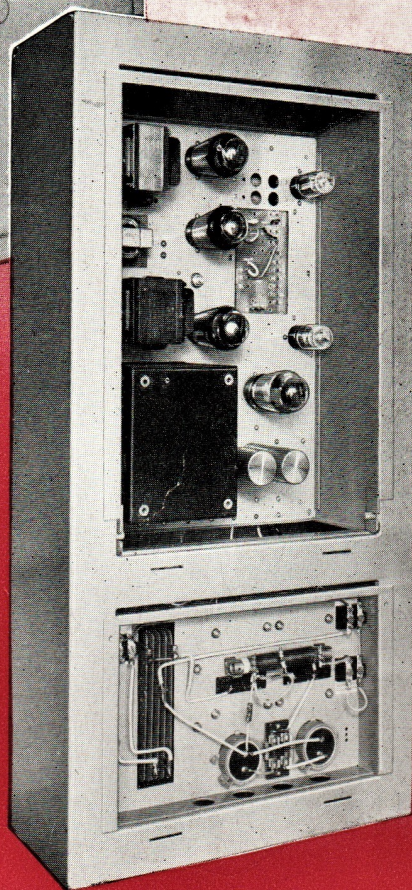
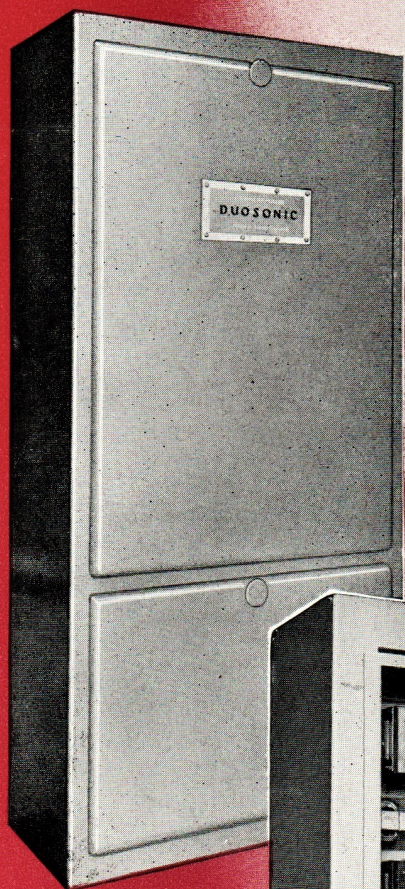
High tension and heater supplies for the voltage amplifier are obtained from the main amplifier.

- (c) The Exciter Lamp Supply Unit.

All valves, transformers, smoothing condensers and controls are mounted on the front of the chassis with terminals that project through to the back, where all wiring is disposed in one place. The chassis is hinged at the bottom and without the need to detach any wiring, can be brought forward in a horizontal position where it is securely held for convenience of service. The performance of the Amplifier is not interrupted when opened for service inspection.

The equipment has been designed for direct operation from alternating current supplies of any periodicity from 40 to 60 cycles, and on any voltage between 95 and 130 or between 190 and 260.

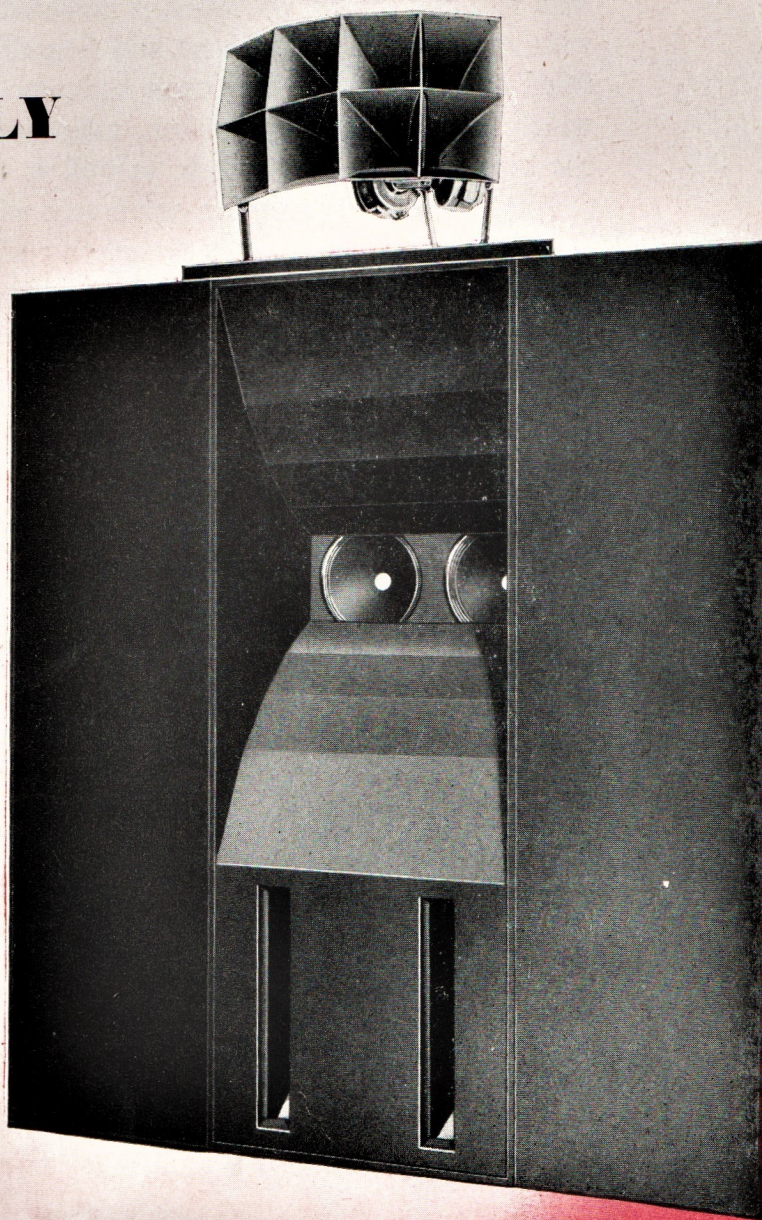
Sound changeover is effected by switching the Exciter Lamps—two switches being provided in positions convenient to the operating positions of the Projectors.



The **SPEAKER ASSEMBLY**

For the smaller theatre up to 900 seats, one 12-inch permanent magnet speaker is mounted in a reflex cabinet with H.F. horn above, having exceptionally good frequency response characteristics and power holding capacity. For the larger theatres, full "Duo-sonic" speaker assemblies are installed. These two-way speaker systems give the utmost fidelity in reproduction, with conversion efficiencies of the order of 40% in the smallest size, rising to 50% in the largest size. They utilise all-metal multi-cellular treble horns driven by units having all-metal diaphragms. The bass horns are of the direct flare type with no rear emanation.

Illustration shows the full "Duo-sonic" Speaker Assembly as installed in the larger theatres of up to 2250 seats.



MONITORING

The Monitor Speaker is controlled by an "on" and "off" switch, and the volume of sound output is adjusted at the time of the installation to be representative of the sound volume in the auditorium.

The **GAUMONT-KALEE "20" STAND**

The Gaumont-Kalee "Universal" Stand is a solid cast iron base fitted with levelling screws, on which is mounted a cast aluminium column with supports for Lamphouse and Soundhead. Aluminium covers fitted on each side of the Stand accommodate the electrical controls which include the motor switch, main arc switch, and, if required, the picture changeover switch, as well as the automatic switches for "Pyrene" fire extinguishing equipment when fitted. The Stand is despatched from the factory completely wired ready for installation. An interesting feature is that by the introduction of distance pieces between the cast iron base and the aluminium column, adjustment in height can be made to suit existing installations.

"PYRENE" FIRE EXTINGUISHER EQUIPMENT. This is an optional accessory which is built into the equipment when specifically required. It comprises a CO₂ cylinder, striker mechanism and automatic cut-off switches for the motor and arc lamp. In the event of a fire occurring in any part of the film track, it has been proved by exhaustive tests that this extinguisher equipment will put out the fire instantaneously. The insertion of a fresh CO₂ cylinder and the resetting of the striker mechanism can be completed in a matter of seconds, with the result that the performance can proceed almost immediately on the same machine, without the audience being aware that a fire has taken place.

HEAD

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