

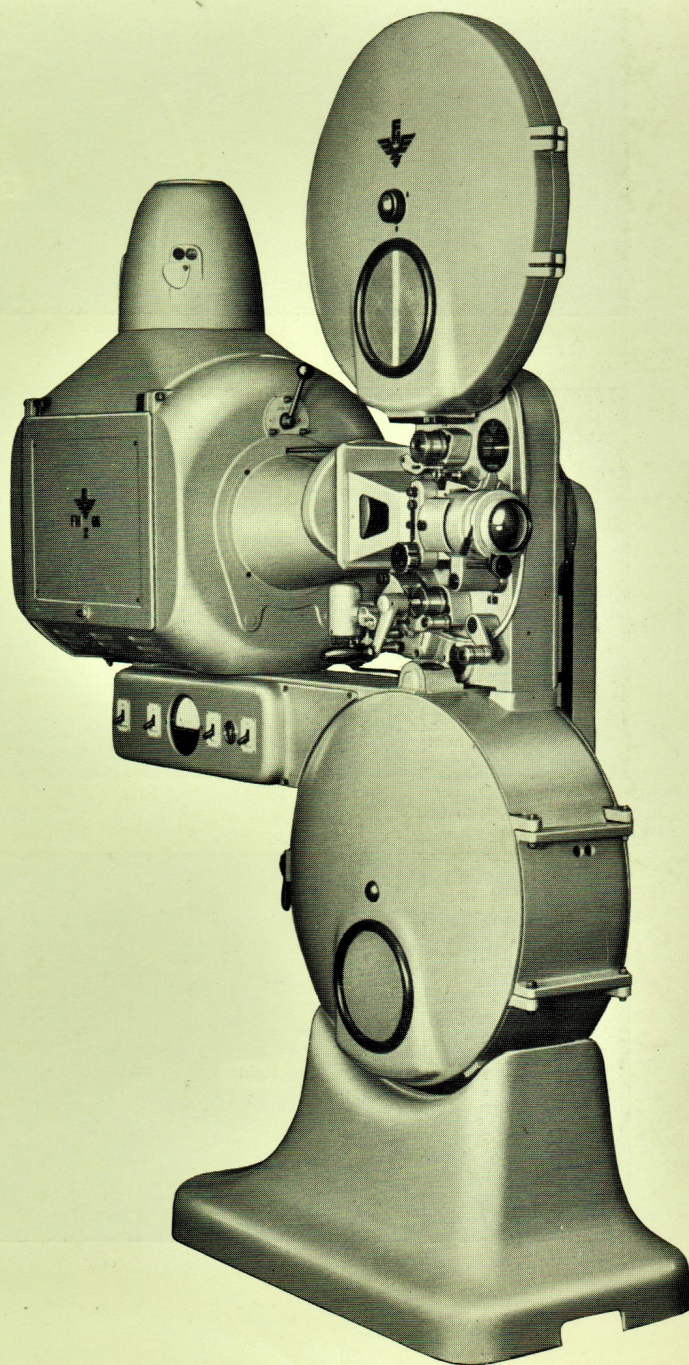
SOUND FILM PROJECTORS

TYPE FH 66 / FH 77

for Cold-Light Projection

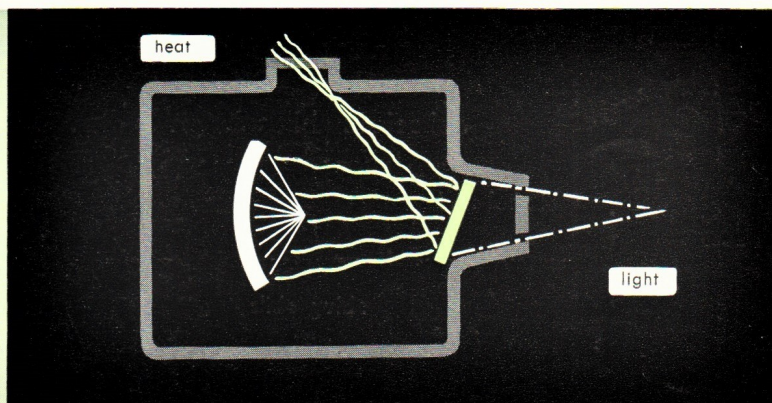
Remote Control

Automatic Control



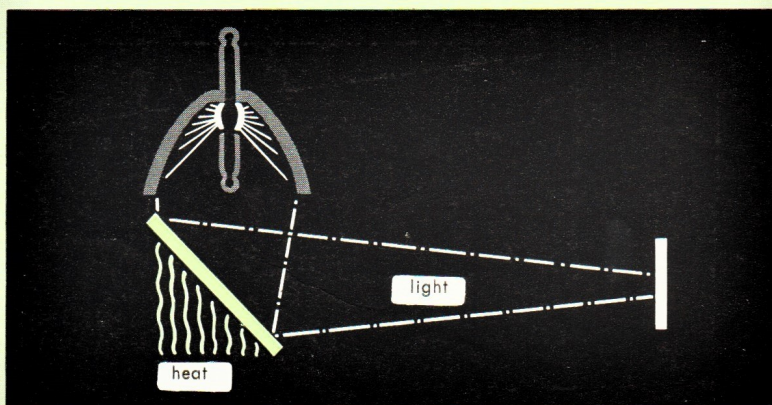
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Cold-light projection avoiding an excessive heating of the lamphouse



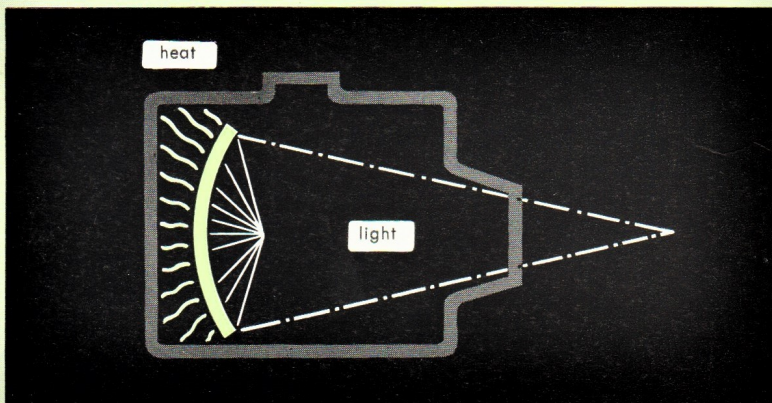
Cold-light interference reflector

to be incorporated into the tubus of carbon lamphouses. The cold-light interference reflector allows the light rays to pass through without hindrance, whilst the radiation of heat is reflected. The heat is thus led away without warming the lamphouse.



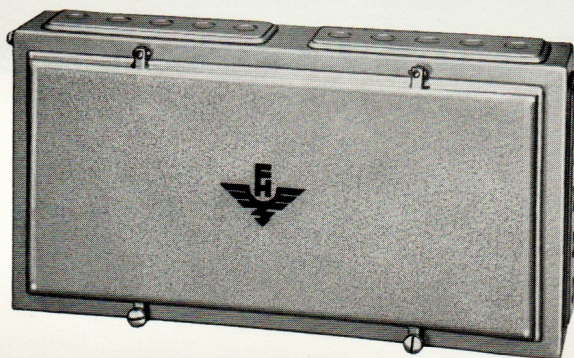
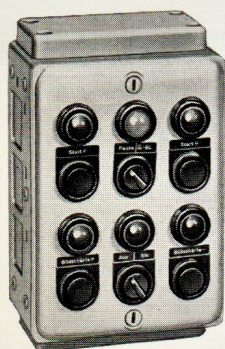
The best solution possible: Cold-light plane-reflector

for Xenon lamphouses. The cold-light plane-reflector is a component of the universal insert portion of Xenon lamphouses, types FH 66/77 X and FH 99 X for Xenon cold-light projection. The FH 66/77 X lamphouse can also be used advantageously with universal insert portion for projectors of any make. Every excessive heating of the lamphouse is avoided.



Cold-light concave reflector

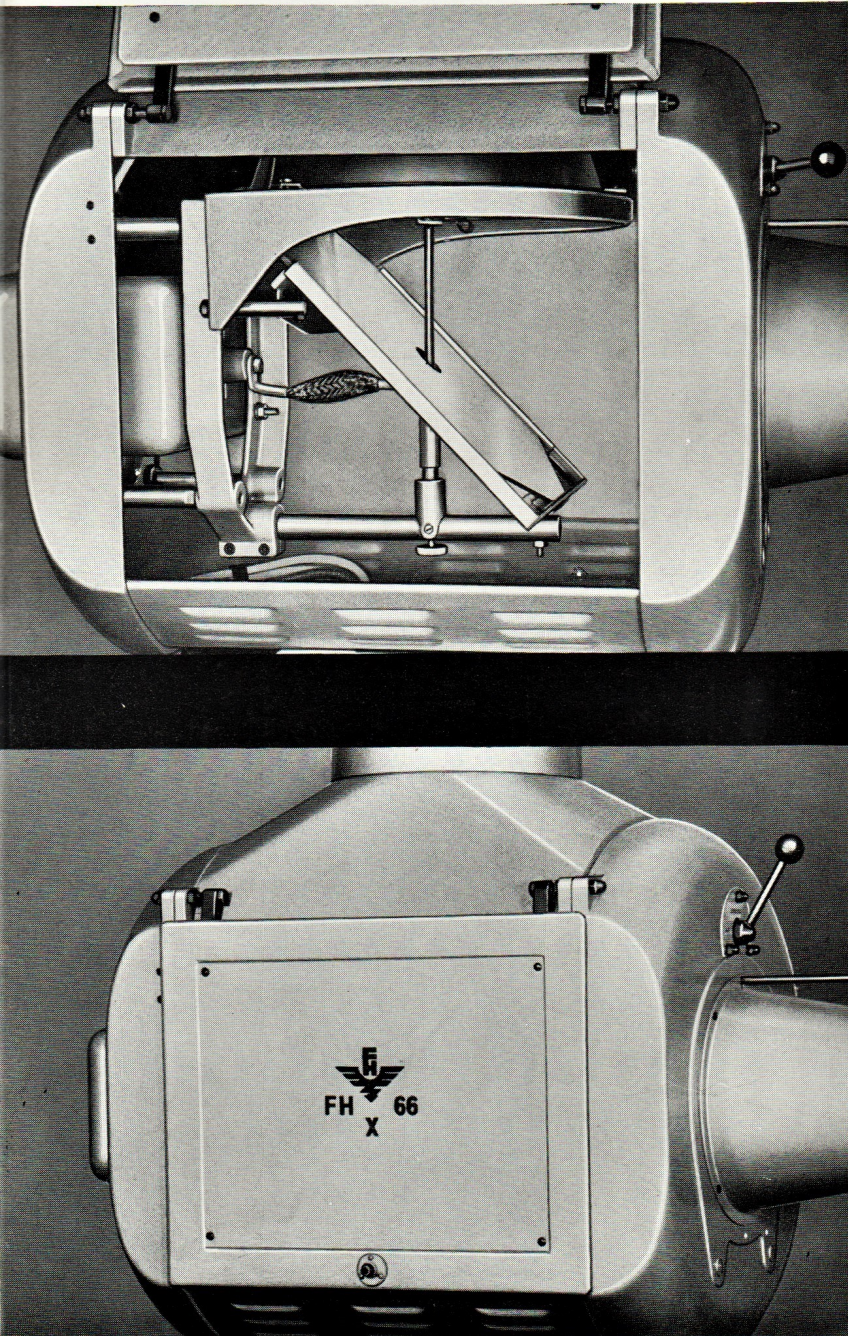
for carbon lamphouses. The cold-light concave reflector has the outer shape of a cinema reflector. It only reflects the light, whilst the heat passes through without hindrance. The FH cold-light concave reflectors are preferably supplied with a diameter of 356 mm. A thermal influence upon the lamphouse rear is however unavoidable when using such a cold-light concave reflector.



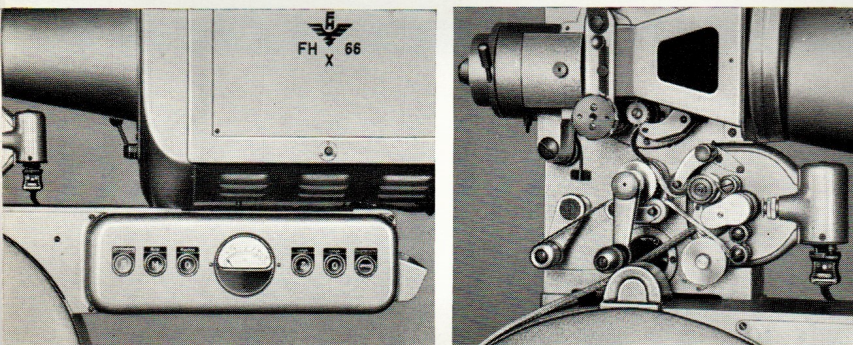
Automatic change-over for FH Xenon projection.

The application of Xenon-light and the introduction of the cold-light projection were the essential preconditions for the creation of an automatic control for our Sound Film Projectors. The illustrations show the automatic change-over device (right-hand) with control unit. The installation punctually executes the working processes preset by the control unit or stored in the switch apparatus.

The Universal Xenon Lamphouse for Cold-light Projection



For this optical system a patent has been applied for. It contains the cold-light plane-reflector and concave reflector in the lamphouse dome, reflector- and lamp holders as well as the ignition unit. All these parts are comprised within the so-called „Universal insert portion“ which in connexion with the FH 66 X lamphouse is also suitable for altering the arc lamps into the Xenon system. Projectors of any other make can likewise be equipped with the Universal Xenon Lamphouse. The advantages obtained by applying the Xenon cold-light projection with cold-light plane-reflector, are of considerable importance. By a new wedge-shaped coating which is capable of interference on both sides of the cold-light plane-reflector, it is possible to conduct the light beams to the film gate without condenser nor auxiliary reflector and thus without any loss of light. In this way, the heat rays which pass through the cold-light plane-reflector without hindrance, are led away so that there is no excessive heating of the lamphouse, which means a great advantage indeed. Consequently a vaulting or any other damage of the film is absolutely eliminated, even in the case of the most intense lighting currents. The optical lamphouse fittings of the „Universal insert portion“ for the Xenon cold-light projection unite in the best way the advantages of a Xenon system with those of the cold-light projection and therefore present, along with the most careful treatment of the films and the greatest sharpness of pictures, an economical and ingenious utilization of the latest developments in the line of motion picture machinery.

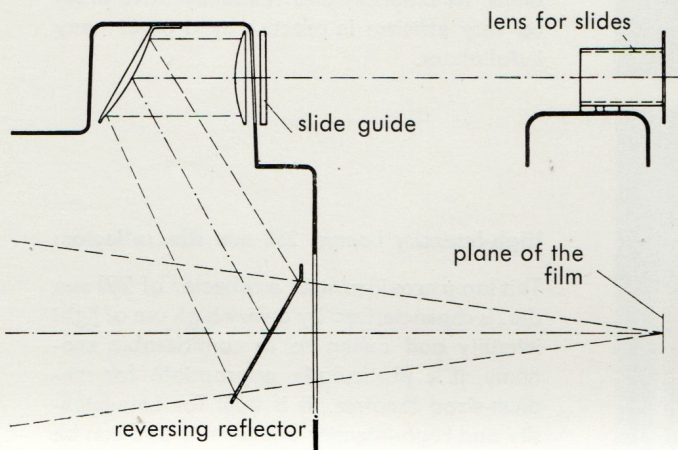


An Automatic Control

can be attached, as an additional unit, to all FH 66/77 standard machines. Press-buttons with contactors are provided for the switching motion. By using the scanning device with film monitor it is possible to change over automatically and to cause a self-acting stopping in the case of film break or at the end of a film.

Slide projector of high light-intensity on the Xenon lamphouse

Path of rays for slide projection
type FH 66/77 Xenon



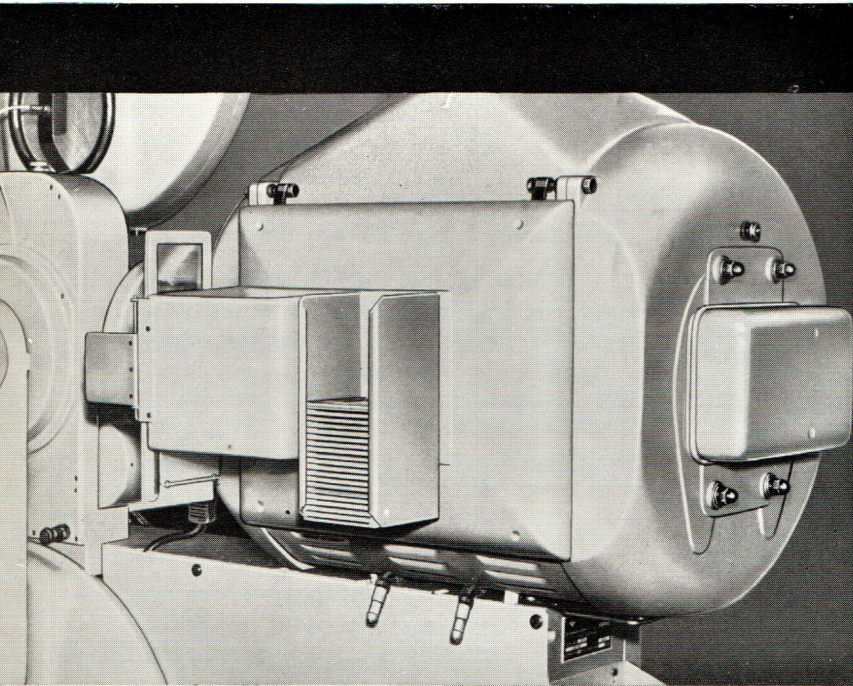
The FH Xenon slide projector can be attached to all FH Xenon projectors of right-hand and left-hand type.

The reflector system of high efficiency guarantees the optimum utilization of the light-intensity. The maintenance is very simple and allows a perfect changing-over. The slide-magazine being fixed to the slide projector is a very handy one and easy to operate. When using the corresponding lens-holder this projector is ideally qualified for the projection of slides of all sizes.

Contrary to the attachments for FH 66/77 Carbon lamphouses, that one of the Xenon type is placed in a cast frame. At the back of the projecting part for the protection of the eyes there is a box for taking 38 slides with frames.

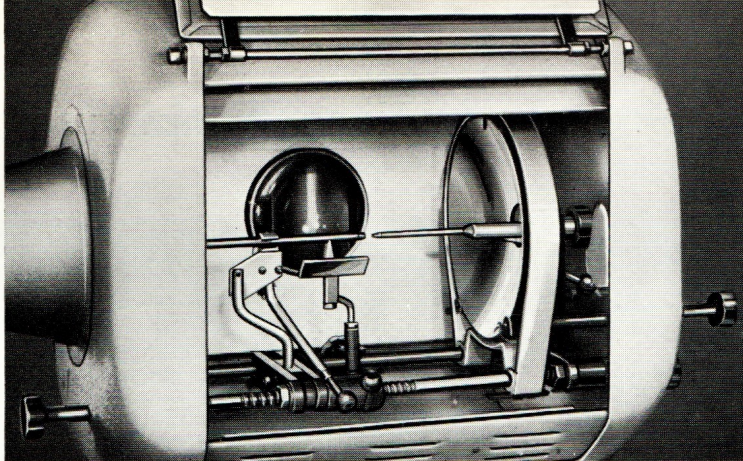
A simple slide guide for manual operation is applied to this projecting part for inserting the slides. When using a special book-like change-over device, the latter is fixed by a simple angle holder.

When operating with slides, a hand lever placed on the front wall of the lamphouse and manipulable on both sides, brings a swing-arm provided with plane-reflector up to the limit stop into an oblique position in the cone of the rays coming from the light source. The angled beam of rays is therefore conducted via a reversing reflector and a condenser lens on to the slide.



Slide projector for FH 66/77 with carbon arc lamphouse

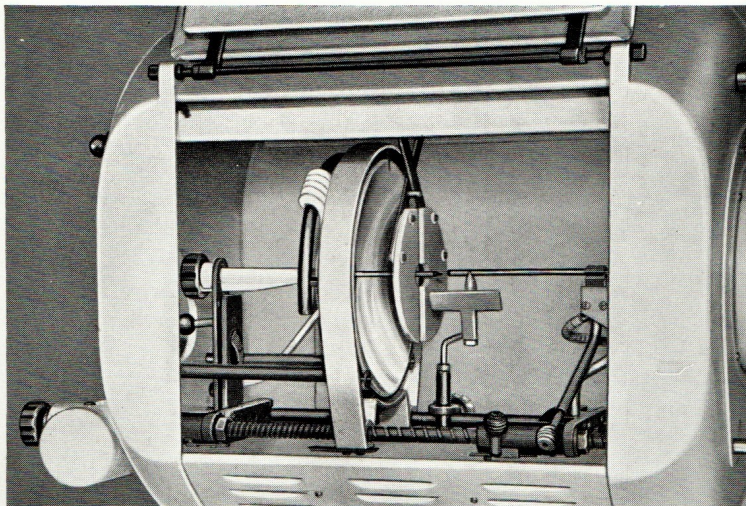
is supplied as before in the well-known execution for arc-lamp machines. A reflector system is likewise used for this execution. The excellent utilization of the light and the constant illumination allow a brilliant performance of all known picture systems.



CARBON LAMPHOUSES

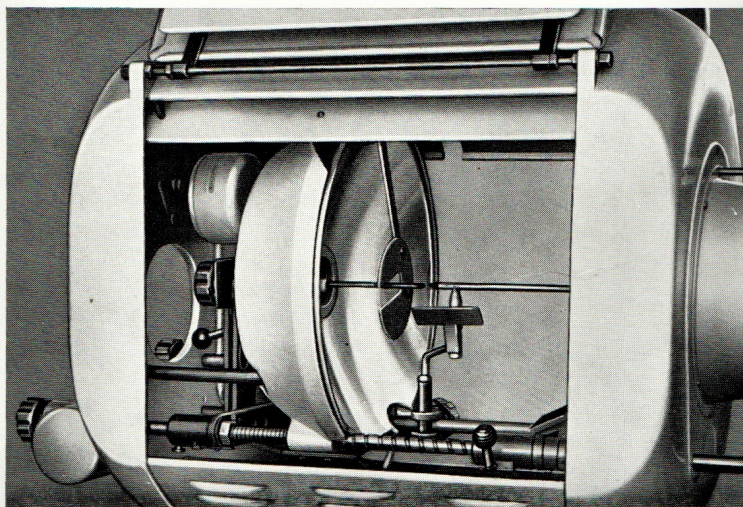
Low Intensity Lamps, 250 mm dia. reflector:

The lamphouse with reflector of 250 mm dia., suitable for black carbons, is especially recommended for smaller and medium-sized cinemas. The lamp can be loaded up to 35 amps. Its simplicity and reliability have proved very efficient in practice by a great many installations.



High-Intensity Lamps, 250 mm dia. reflector:

This lamp provided with a reflector of 250 mm dia., is characterized by a very high use of light intensity and owing to its considerable economy, it is particularly appropriate for medium-sized theatres. It is built for Low-Intensity and High-Intensity Equipments and can be loaded up to 55 amps.



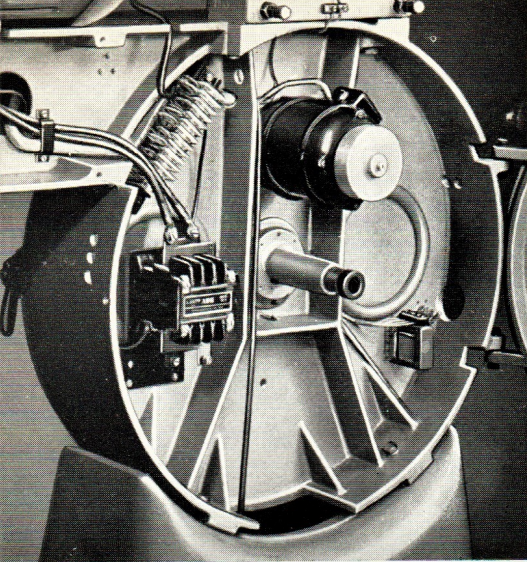
High-Intensity Lamps, 356 mm dia. reflector:

The reflector of 356 mm dia. of this lamp which can be loaded up to 75 amps. is intended for medium-sized and large theatres. A perfectly illuminated picture is guaranteed. The well-known and approved simplicity of attendance of the FH type machines is completed by a built-in electroautomatic change-over device of standard design, which is located in the lamphouse and controlled by a push-button.

A hand-operated light-closing device for the preceding and following music is placed above the electromagnetic change-over device.

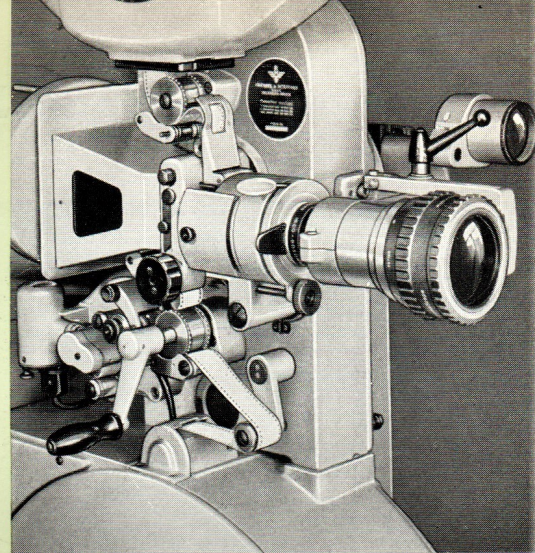


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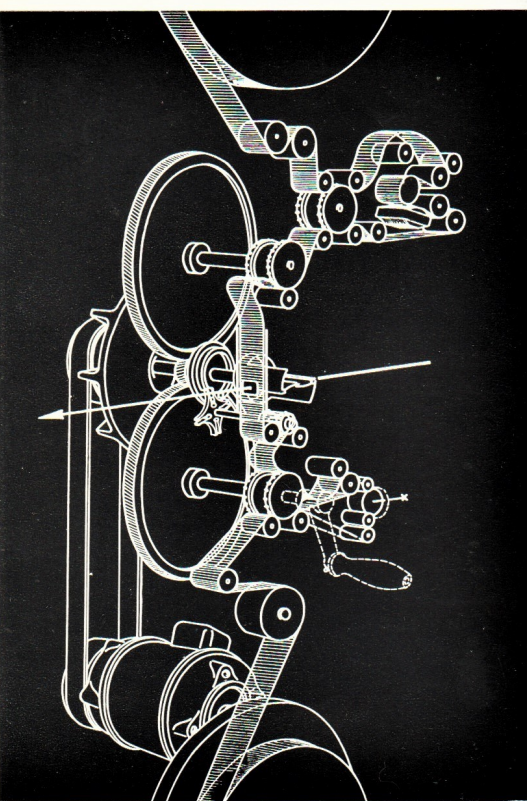


Lower magazine

The excellent FH 66/77 Sound Film Projectors installed in many thousands of theatres combine high reliability of operation with ingenious construction characterized by its stability and simplicity. The lower magazine made of light-metal casting, forms part of the pedestal and contains, besides the motor, the take-up friction with slipping clutch.



Projector head

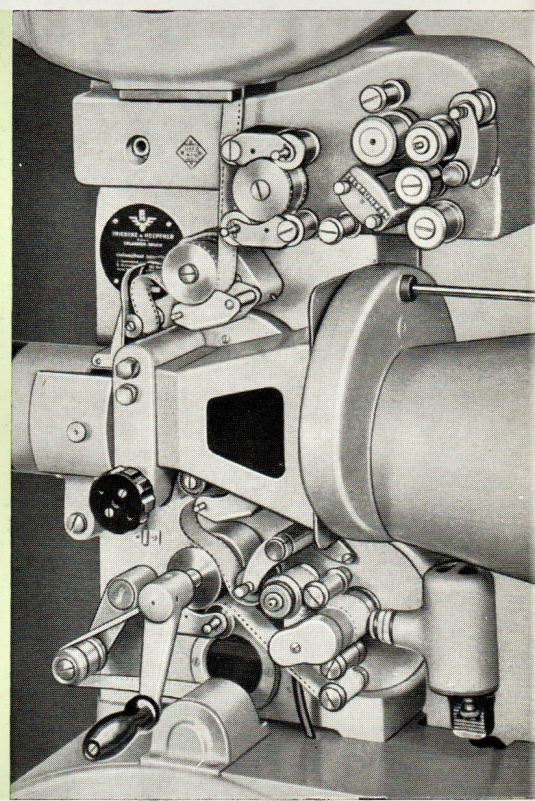


Film feed scheme

The projector head with its good solution of the driving problem, ensures a function nearly free of wear. A smooth running, fully sufficient oiling of all moving parts and an excellent film guidance are the most efficient features of this construction. The additional magnetic sound-unit is attached sideways at the top of the projector head.

The lens holder is equipped with a precision adjustment which means an important improvement. The sharpness adjuster fitted to the intermediate tube, enables a quick change of the lenses when changing the picture system.

The FH-type motion picture installations give you all advantages of the latest developments in the line.



Projector head with additional magnetic soundhead



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