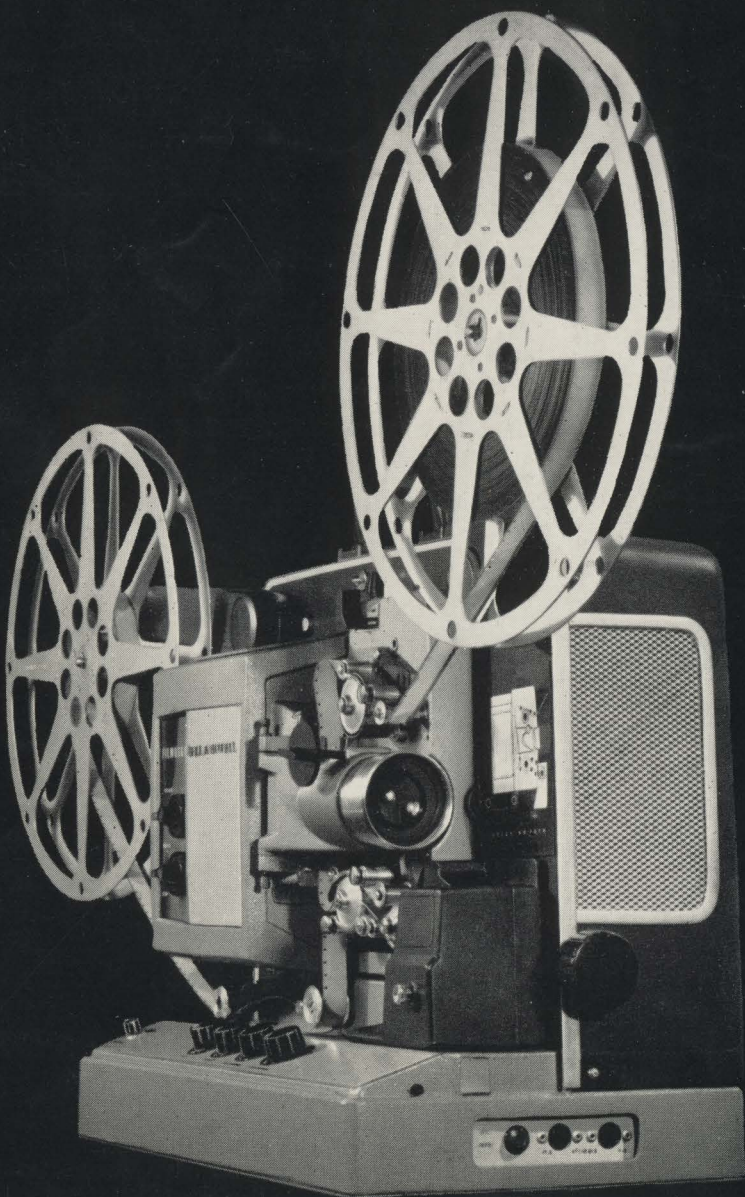


INTRODUCING THE MAGNIFICENT NEW

BELL & HOWELL



FILMOSOUND

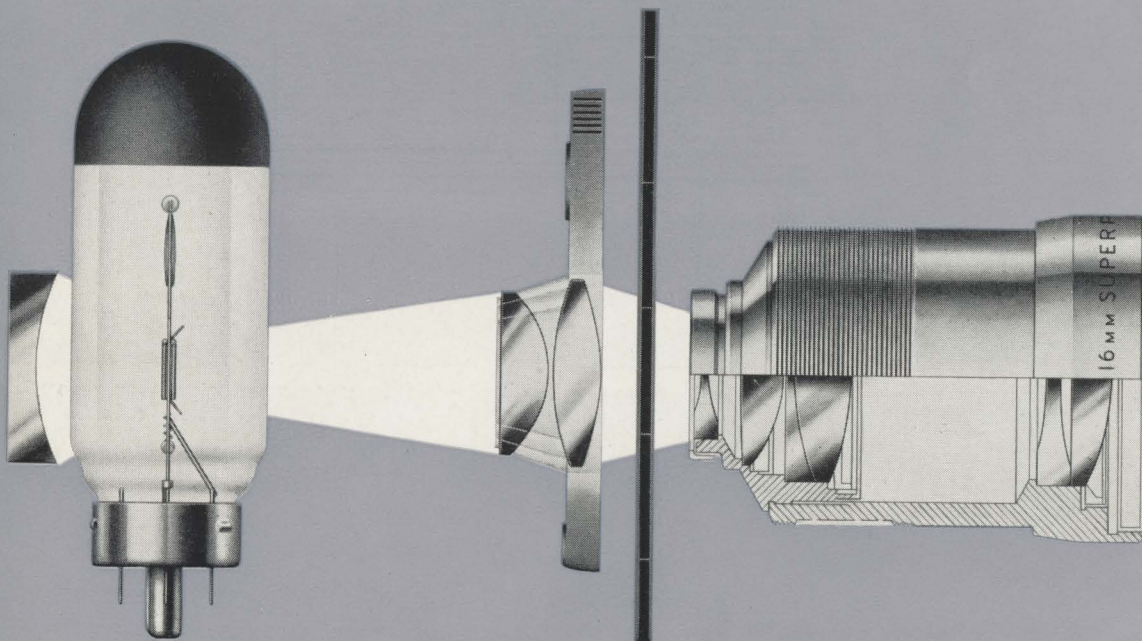
16mm sound projector

model 642

FILMOSOUND

TREMENDOUS LIGHT OUTPUT

New integral design · Quiet operation · Minimum maintenance · Superb sound reproduction
Versatile performance



Here's the secret of the Filmosound's exceptionally powerful light output—the straight line optical system which includes an **ASPHERIC** condenser unit, the precisely located reflector and new Super Proval lens with the remarkably wide aperture of $f/1.4$. Combined with a new compact filament high efficiency projection lamp this gives the brightest, clearest pictures ever achieved with this type of 16 mm projector. Compared with existing systems using standard mains voltage lamps with a maximum rating of 750 watts, the new Filmosound with high voltage 1000 watt lamp as standard achieves the phenomenal increase in light output of over 80%. For still greater efficiency, 115 volt lamps of 750, 1000 or 1200 watts can be used by connecting a transformer which is available as an accessory.

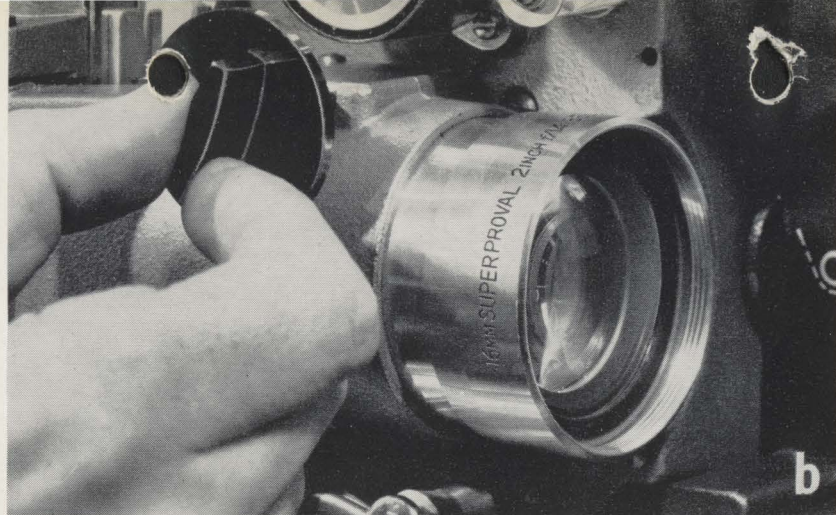
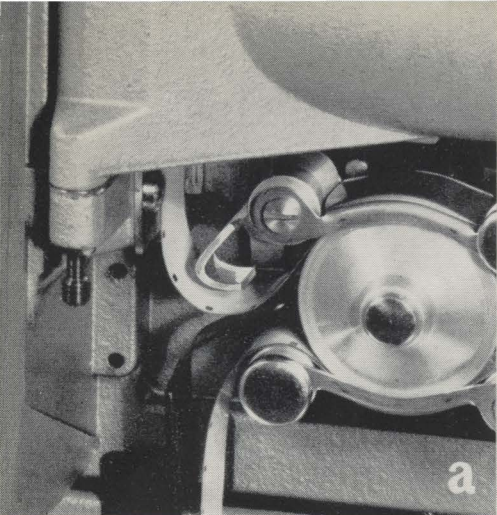
NEW INTEGRAL DESIGN for compactness, and simplicity of use. Features to note are operation direct from 200–250 volt A.C. mains supply—one simple connection and the equipment is ready for operation; (external transformer only required for 115 volt lamps). Integral reel arms which click into position or fold neatly into the projector casing. Built-in permanently connected elliptical speaker. (For very large audiences an accessory speaker is available as an extra).

QUIET OPERATION. Nylon gears, a specially designed intermittent mechanism and an induction motor drive result in mechanical noise being kept to a minimum. The induction motor, also prevents any electrical interference with the projector sound system, radio and T.V.

MINIMUM MAINTENANCE. Bell & Howell's factory-sealed system of permanent lubrication ensures smooth and effortless operation of the mechanism without additional oiling by the user. A vital component, the specially-designed three tooth shuttle is made of Stellite—a hard, wear-resistant alloy which forms the basis of modern lathe cutting tools and is the ideal material to give extended life.

SUPERB SOUND REPRODUCTION. Faithful sound reproduction is assured by the advanced design of the sound head which utilizes a precision-balanced, extra large diameter flywheel to eliminate wow and flutter. Stabilizers ensure that the intermittent motion imparted by the film transport mechanism is neutralised before reaching the sound head. The amplifier uses the latest printed circuit techniques and provides a stable and highly efficient unit which will faithfully reproduce the full range of frequencies covered by the film sound track. Instead of the conventional photo-cell, the new Filmosound employs an entirely new germanium photo-diode. Small in size, but mighty in performance, the photo-diode combines the advantages of stable operation with minimum background noise.

VERSATILE PERFORMANCE. Feature for feature no other projector can offer the advantages inherent in the new Filmosound, for its versatility is the result of solid experience in the production of precision audio-visual equipment. In addition to its brilliant lighting and high quality sound are such features as, rack and pinion lens focusing; built-in automatic loop restorer; three-tooth stellite shuttle; lamp ejection lever; high speed rewind without interchange of reels; swing open film gate; straightforward threading and conveniently grouped operating controls.

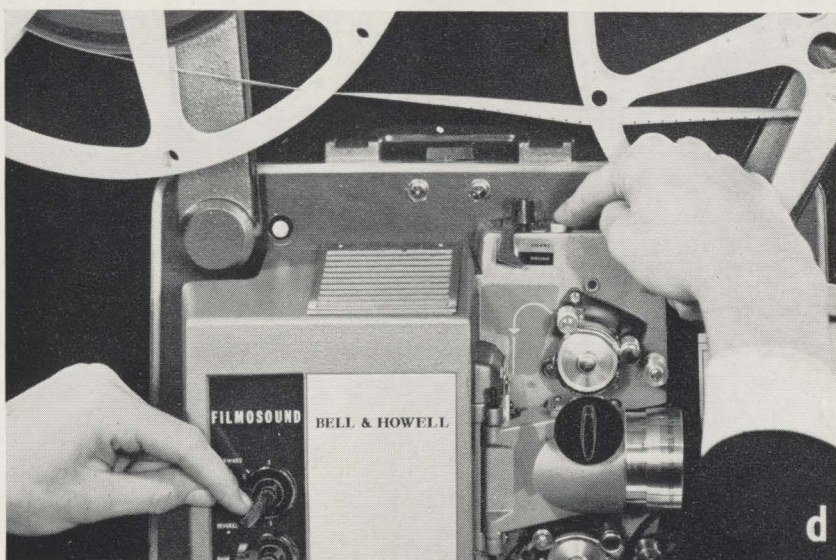
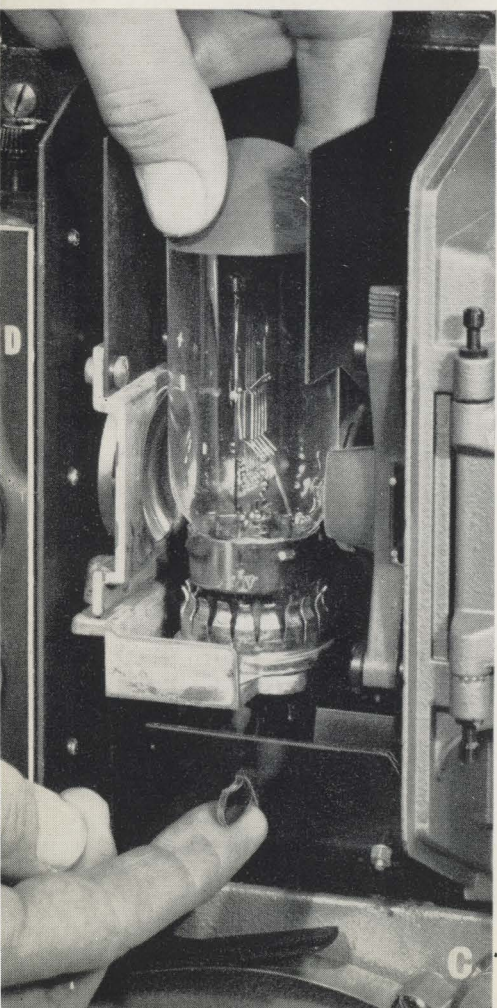


a AUTOMATIC LOOP RESTORER

Maintains correct loop diameter at all times. Eliminates the need of stopping the projector to adjust lower loop.

b POSITIVE LENS FOCUSING

Instant focus without pulling, pushing or twisting the lens. Rack and pinion movement ensures smooth, critical focus at the touch of a knob.



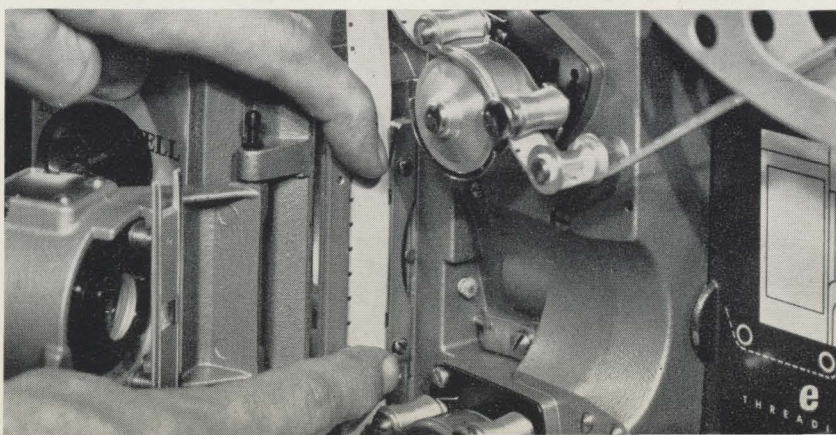
c EASY LAMP REPLACEMENT

Change lamps quickly without waiting for lamp to cool. Simply move a lever to eject. The exciter lamp has a similar ejection lever.

d SIMPLE, FAST REWIND

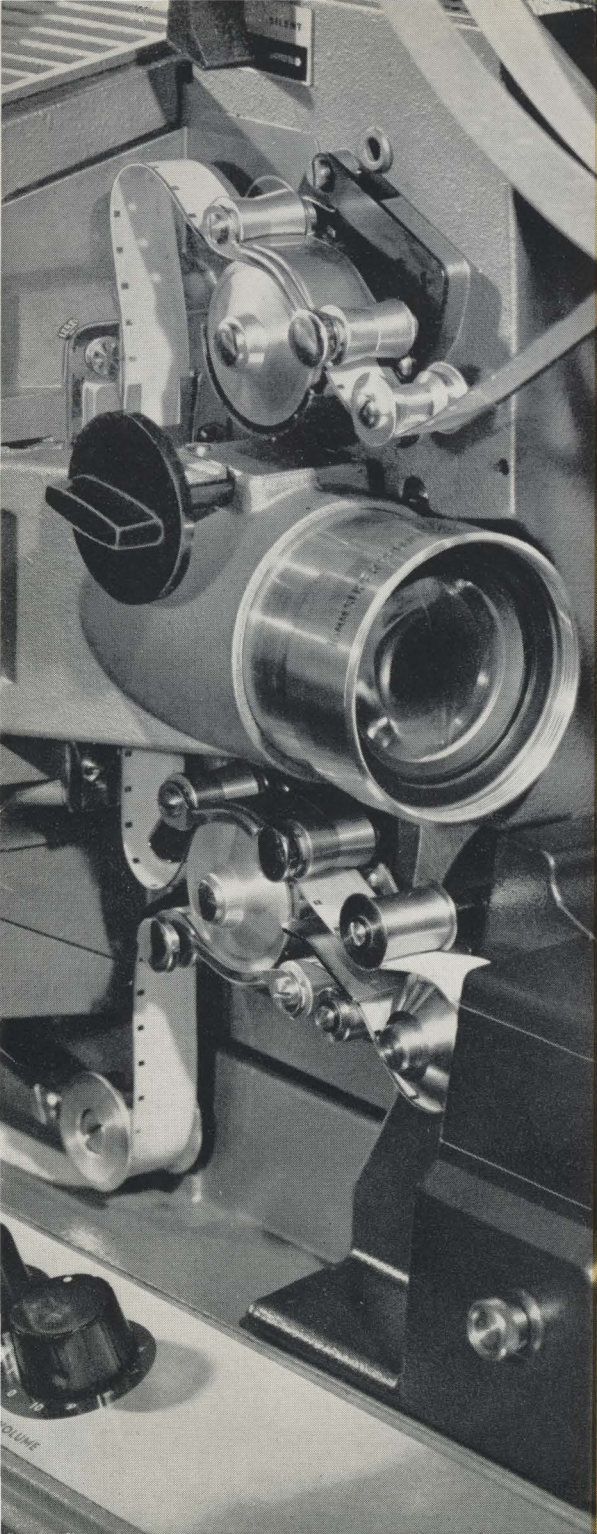
No need to change reels—just raise rear reel arm, re-connect film to front reel, switch projector to reverse and press the rewind button for fast operation.

BELL & HOWELL



e SWING-OPEN GATE

Simplifies threading, permits easy access to aperture plate for cleaning. Aperture plate and pressure shoe are recessed to minimise film wear.



BELL & HOWELL

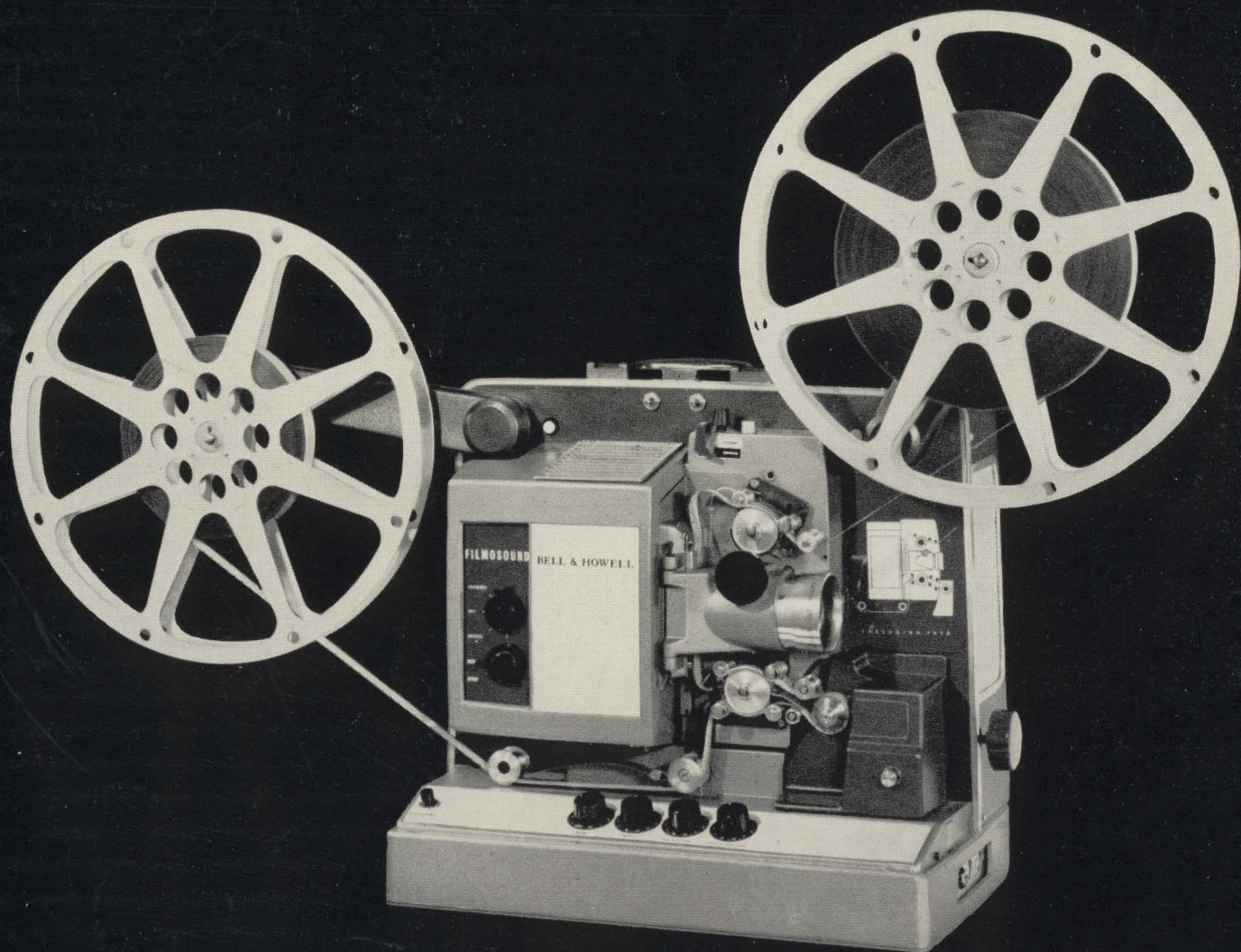
**brings
phenomenal
new
brilliance
to 16mm**

This new 16mm sound projector is an eminently worthy successor to the long established and internationally famous Bell & Howell Filmosound range.

Bell & Howell are well known as the pioneers of 16mm sound projection and today countless numbers of Filmosounds are to be found giving excellent service in Education, Industry, Commerce and in many other spheres of audio-visual activity throughout the world.

The new model is the product of the expert craftsmanship and precision engineering which has earned the Filmosound its universal reputation for long, trouble-free life with minimum maintenance. This light-weight projector is entirely new in design and performance—a brilliant synthesis of the most up-to-date techniques and materials, ensuring still greater audience appreciation, even simpler operation and maximum sturdiness combined with extreme portability.

BELL & HOWELL



BRIEF SPECIFICATION OF THE NEW FILMOSOUND MODEL 642

Operation: Direct from 200-250 volt AC supply—no external transformer needed. Simply plug in and switch on. 25-foot mains lead supplied. For 110-160 volt supply, external transformer available.

Lamp: 1,000 watt compact filament lamp with 4-pin valve type base for extremely accurate location fitted as standard. 750 watt optional. 115 volt, 750, 1,000 or 1,200 watt lamps available for use with external transformer.

Standard Lens Coated 2" f 1.4

Illumination: Straight-line optical system giving remarkable brilliance of image.

Lamp Removal: By ejection lever—no risk of burnt fingers.

Integral Reel Arms: Shaft and gear driven for speedy setting up. Arm positions when set up are top-mounted to eliminate overhang below the projector stand.

Cooling System: Powerful double-banked fan maintains constant speed for efficient cooling regardless of projection speed.

Sound and Silent Speeds: Induction motor drive permits speed change from 24 to 16 f.p.s. via step pulley—hence no variation in speed of cooling fan.

Threading: Large sprockets combined with well-known Bell & Howell straight line system of threading for extreme simplicity. Recessed film gate for minimum film wear.

Film Take-Up: Self-compensating constant tension take-up; automatically adjusts for all reel sizes.

Film Movement: Triple-toothed, wear-resisting Stellite shuttle gives improved performance even with damaged perforations, and reduces film wear. Loop absorber maintains lower loop in critical position. Direction switch permits change from forward to reverse at any time.

Rewind: Direct linkage: no interchange of reels required. High speed operation at the touch of a button.

Still and Animation Controls: Still picture control stops film on a single frame at any point, brings heat filter automatically into position. Animation control advances film by any desired amount when control is set to 'Stop'; operates in either forward or reverse.

Film Capacity: 2,000 feet (maximum) of single or double perforated 16 mm film.

Elevation Control: Smooth, quick and easy to operate. Automatically locks in position.

Construction: Main body constructed of precision magnesium alloy die-castings—much stronger and lighter even than aluminium. Covers of tough, scuff-resistant fibre glass—also exceptionally strong and light—are attractively finished in Tyrolean Grey with contrasting Light Grey.

Dimensions:

Length 15 $\frac{3}{8}$ "	Width 9 $\frac{3}{8}$ "	Height 14 $\frac{1}{2}$ "
40.3 cms	24.7 cms	36.8 cms

Weight: 36 $\frac{1}{2}$ lbs. 16.6 kgs.

SOUND REPRODUCTION

Amplifier: Printed Circuit; 15 watts output high signal-to-noise ratio; photodiode cell for high stability, minimum hiss.

Elliptical Speaker: Integral with projector; no speech cable or connection necessary; Accessory speaker available for use in larger halls.

Speech Output Sockets: 8 and 16 ohms.

Sound Drum: Rotating-type drum with extra large flywheel, precision balanced to drum shaft, smooths out variations in constant scanning speed.

Filmosound 641. The economy projector with the powerful performance. Fitted with an f1.6 lens, 6 watt amplifier with single tone and volume controls, and without the still and animation facility, the Filmosound 641 is otherwise identical in design to the model 642. Eminently suitable for use in the smaller auditorium.

Mr Boersma - Passere - Verkeke
114800



RANK PRECISION INDUSTRIES LTD.,

Cine & Photographic Division, Mitcheldean, Gloucestershire, England. Telephone: Drybrook 421

Printed in England

EA/2M/162



Filmovara Attachment

A valuable accessory which can be used in conjunction with the normal projection lens, this attachment permits variation of picture size without moving the projector or screen. For instance, fitted to the 2" lens it provides a continually adjustable range of focal lengths from 1 $\frac{3}{4}$ " to 2 $\frac{1}{4}$ ". This facility means that with the 2" lens in use the projector and screen can be placed at any distance from 22 to 28 feet apart and by using the Filmovara attachment, the picture can be enlarged or reduced as necessary to fill a 56" by 41" screen.

1.5 KVA Transformer Unit

Permits the use of 115 volt, high efficiency projector lamps of 750, 1,000 or 1,200 watts with the new Filmosound projector. Incorporates a voltmeter and selector switch for close control of output voltage. Input adjustable to accommodate supplies of 190 to 250 volts.

