



STRAND BABY SPOTS



Patt. 23

PROFILE SPOT

The Baby Spotlights described here and on the following pages are fully complementary in design and performance. A full range of interchangeable accessories ensures a wide application.

The Pattern 23, 250/500 watt Baby Mirror Spotlight projects a clear cut beam of a profile determined by a mask. It is ideal for stage lighting from the Front of House and has many applications where stray light cannot be tolerated. It can even be used to project rudimentary cloud and other cut-out masks. Thousands of these lanterns have found a use in architectural lighting, in ballrooms, display and exhibition work, picture and poster lighting, etc.

OPTICAL DESIGN

Front and rear reflectors collect a large solid angle of light from the lamp and pass it through a gate of any desired shape, and an objective lens projects this as a clear cut beam of the same profile as the gate. This arrangement produces a light output equivalent to two or three times the wattage of a normal spotlight.

BEAM ANGLES (largest mask, sharp focused)

Patt. 23 (one 3½-in. dia. objective lens) 22°

Patt. 23F (one 3½-in. dia. fresnel objective lens) 30°

Patt. 23W (two 3½-in. dia. objective lenses) 37°

Patt. 23N (one 6-in. dia. objective lens) 11°

Beam Angle. The angle in which the intensity of the beam varies in the ratio of 2:1. In a Profile spot the sharp cut-off ensures virtually no light outside this angle.

LAMPS (Specify medium prefocus P.28 caps only)

Class	Wattage	Light centre length	Safe tilt from cap down	Life (hours)
T/3	250	55.5 mm	90°†	200
T/1	500	55.5 mm	90°†	200
B1/7	250	55.5 mm	135°	800

†Angle of tilt applies to filament flat on, not edge on. No tilt is permissible in the latter direction. The line between the tilting bolts on the lantern MUST be kept horizontal.

DIMENSIONS

	In.	mm		In.	mm		In.	mm
A	11	279	D	8	203	G	4½	114
B	12	305	E	3	76	H	4¾	121
*C (approx.)	13½	337	F	4½	114	*J (approx.)	8½	216

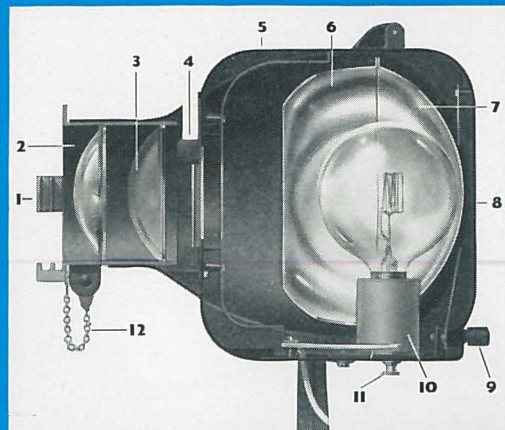
*For Patt. 23/N these dimensions are increased by 6½ in. (165mm).

WEIGHTS

Patt. 23 and 23F: 6¾ lb (3kg).

Patt. 23W: 7lb (3.2kg).

Patt. 23N and 23N/RH: 8½lb (3.9kg).

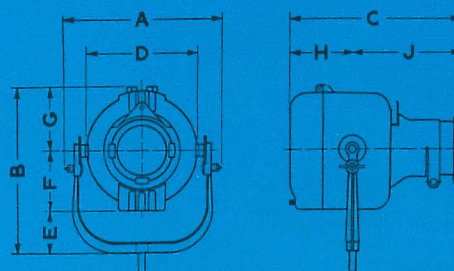


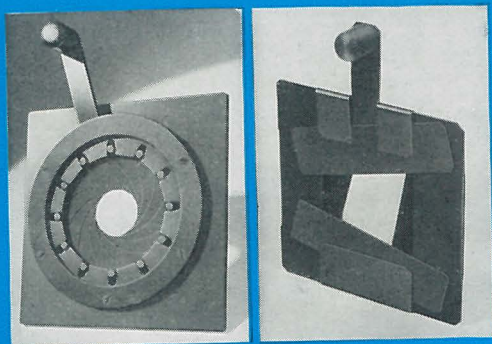
1. Runners for colour frame and/or diffuser.
2. Draw tube for 3½-in. dia. lenses, replaced by similar but larger tube for Patt. 23N.
3. Second lens added for Patt. 23W only.
4. Gate for shutters, iris diaphragm or mask.
5. Lightweight die-cast aluminium housing.
6. Front 7-in. anodised aluminium reflector.
7. Rear 7-in. anodised aluminium reflector.
8. Rear hinged door for relamping etc.
9. Door locking screw.
10. Medium Prefocus (P.28) Strand lampholder
11. Light intensifying knob.
12. Safety chain for lens draw tube.

Lantern includes die-cast trunnion with clamping disc and removable ¾-in. Whit. bolt, 2 ft 6 in tails and one metal colour frame. Finish - hard hammer-grey outside.

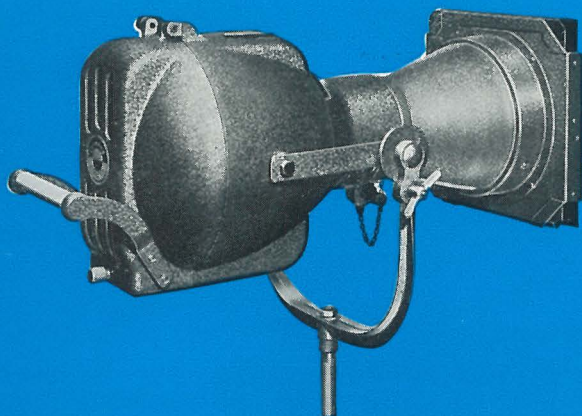
LUMINOUS INTENSITY		
Lantern	Beam Angle	Candelas approx.
Patt. 23	22°	16,650
Patt. 23F	30°	8,900
Patt. 23W	37°	6,530
Patt. 23N	11°	34,000

Figures are for 500-watt 230 volt Class T lamps. For 115 volt lamp add approx. 10 %

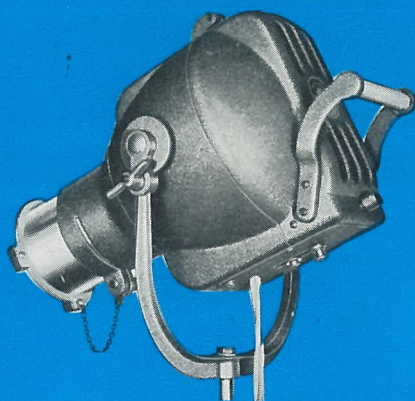




Iris Diaphragm ref. 363. Adjustable mask ref. 364.



Patt. 23N/RH narrow angle model with rear handle.



Patt. 23/H with rear handle.



Patt. 23/S. Built-in shutter suspended from 367 plate.

Patt. 23

PROFILE SPOT

VARIABLE BEAM SHAPE AND SIZE

All models are supplied with four metal diaphragm plates of fixed but different diameters. Optional accessories are an Iris Diaphragm (ref. 363) for varying the diameter of circular beams, and a removable four-sided Adjustable Mask (ref. 364) which will provide any shape of four-sided beam. These masks slide into the gate provided (see 4 in section opposite). A mask of any desired shape may be cut from thin metal or a mica slide with a cloud or other scene may be used. A greatly reduced aperture will result in a loss of intensity, and therefore a larger aperture with a narrower angle objective lens is usually preferable. The edges of the beams can be softened by using a diffuser glass (ref. 374 or 375) in front of the objective lens.

FOR USE AS A 'FOLLOWING' SPOT

For 'following' purposes, or when a spotlight will have to be handled frequently, any of Patt. 23 spotlights can be fitted with a heat-resisting rear handle providing this is specified at the time of ordering by adding the suffix **-/H** to the pattern number. The one exception is the Patt. 23N which has to be re-pivoted on account of the out-of-balance weight of the narrow angle lens front. This lantern fitted with a rear handle is identified as Patt. **23N/RH**.

BUILT-IN SHUTTERS

When the lantern will be required to project a variety of rectangular beam shapes, four independent gate shutters operated by means of external knobs may be fitted providing this is specified at the time of ordering by adding the suffix **-/S** to the pattern number. This variant is available on all models except the Patt. 23N/RH. An iris diaphragm cannot be used, but the gate will accept ref. 366 metal diaphragms or purpose-made masks.

Patt. 123

FRESNEL SPOT

APPLICATIONS

The Pattern 123 Fresnel Spotlight is used whenever it is required to build up an area of light to a much greater level without however defining the edges of the beam. The size of the peak area to be lit can be adjusted accurately by means of the knob under the lantern and the soft edges of the beam will ensure a gentle transition from one lighting level to another. The lantern may also be regarded as an adjustable flood to provide wide but nevertheless localised coverage.

The Pattern 123 is ideal for stage lighting on the stage itself where rapid spread is essential. Focused back, it gives a narrow intense beam suitable for sunlight effects. The lantern is very suitable for television and photographic studios and there are many applications to display and exhibition work. For the last two, the motorised colour wheel is particularly advantageous.

BEAM DISTRIBUTION

Patt. 123 Beam Angle $10^{\circ} - 35^{\circ}$
Field Angle $20^{\circ} - 45^{\circ}$

Patt. 123W Beam Angle $20^{\circ} - 40^{\circ}$
Field Angle $30^{\circ} - 55^{\circ}$

Beam Angle. The angle in which the intensity of the beam varies in the ratio of 2:1.

Field Angle (formerly known as Beam Angle). The angle in which the intensity of the beam varies in the ratio of 10:1.

LAMPS (Specify medium prefocus P.28 caps only)

Class	Wattage	Light centre length	Safe tilt from cap down	Life (hours)
T/3	250	55.5 mm	$90^{\circ}\dagger$	200
T/1	500	55.5 mm	$90^{\circ}\dagger$	200
B1/7	250	55.5 mm	135°	800

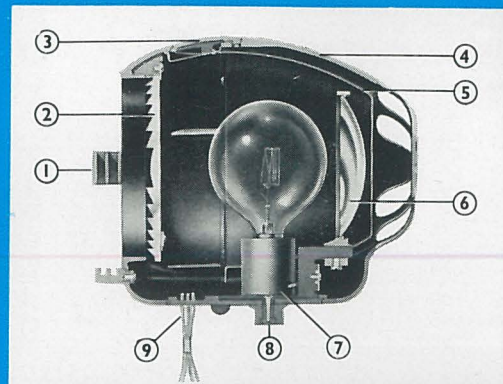
\dagger Angle of tilt applies to filament flat on, not edge on. No tilt is permissible in the latter direction. The line between the tilting bolts on the lantern MUST be kept horizontal.

DIMENSIONS

	In.	mm		In.	mm		In.	mm
A	11	279	D	8	203	G	4	102
B	$11\frac{1}{2}$	292	E	$2\frac{1}{2}$	63	H	$5\frac{1}{2}$	140
C	$10\frac{1}{2}$	267	F	5	127	J	5	127

WEIGHT

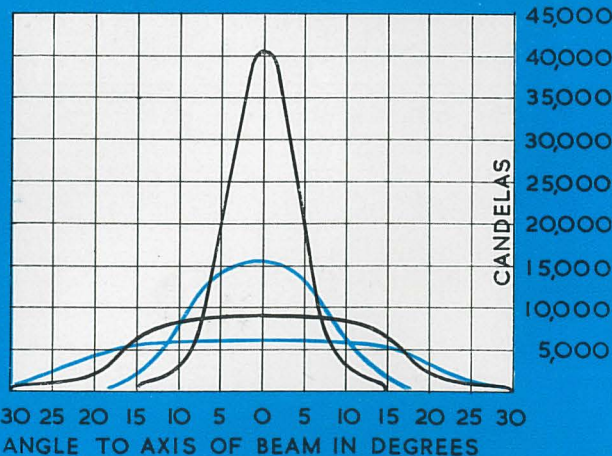
$5\frac{3}{4}$ lb (2.6 kg).



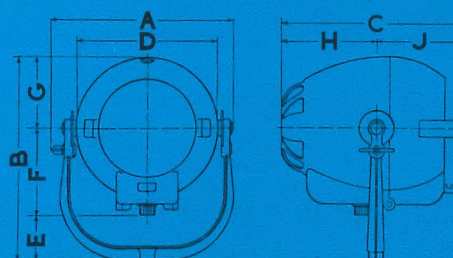
1. Runner for colour frame and/or barndoor attachment.
2. 6-in. dia. short focus Fresnel lens.
3. Recessed self-locking catch allowing entire front to open for relamping, cleaning, etc.
4. Lightweight die-cast aluminium housing.
5. Inner lining.
6. $4\frac{1}{2}$ -in. dia. anodised aluminium reflector.
7. Medium Prefocus (P.28) Strand lampholder.
8. Focusing knob. Models with suffix -/LS to pattern number have lead screw focusing from knob under lens front.

Lantern includes die-cast trunnion with clamping disc and removable $\frac{3}{8}$ -in. Whit. bolt, 2 ft 6 in tails and one square metal colour frame.

Finish - hard hammer-grey outside.



Figures are for 500-watt 230 volt Class T lamps. For 115 volt lamp add approx. 10%. Black curve Patt. 123, Blue curve Patt. 123W max. and min. curves.



Patt. 123

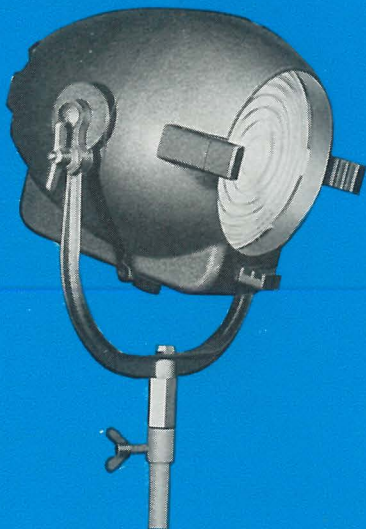
FRESNEL SPOT



Patt. 123 as an acting area flood.



Patt. 123 barndoor attachment ref. 132.



Patt. 123 mounted on telescopic stand using spigot adaptor ref. 484.

OPTICAL DESIGN

Optically, the Pattern 123 has the same high efficiency as the Pattern 23 but the character of the light beam is completely different. It produces an intense beam variable between spot and flood with soft and indeterminate edges. The optical system which produces this result is a large diameter lens formed in concentric steps with back surface broken up to make the beam smooth and free of filament striation.

BARNDOR ATTACHMENT

The size of the lens and its break up qualities make it tend to scatter very low intensity light outside the confines of its beam. In most instances on a lighted stage or in a photographic or television studio, this scatter is too slight to matter. However, there will be cases on a dark stage close to a wing or a cyclorama or other backcloth when this stray must be cut off. To do this a Ref. 132 4-door barn-door attachment is clipped to the front and rotated to suit the particular circumstances. Any or all of the doors can be moved and used in conjunction with the focusing on the lantern to confine the beam and stray light to the area required.

BLACK RISER LENSES

These can be supplied for a slight extra charge to reduce the need for barndoors in theatre work. Add suffix **-/C** to the pattern number.

LEAD SCREW FOCUS MODEL

Where, as in television and photographic work, frequent refocusing of the lantern is likely a lead screw giving easy, precise adjustment from a knob at the front of the lantern under the lens can be specified at the time of ordering by adding the suffix **-/LS** to the pattern number.

TELEVISION MODELS

The Pattern 123 is also available with pan, tilt and focus pole attachment. B.S. $1\frac{1}{8}$ -in. dia. hollow T.V. spigots (Ref. 592) are available for the Pattern 123 and Pattern 23.

Patt. 23 & 123

COLOUR CHANGE WHEELS

These accessories fulfil the dual functions of a remotely operated colour-change for stage purposes, and also a continuously rotating colour wheel suitable for dance halls, display work, etc. The assembly slides into the front colour runners of the lantern. Control is by means of a rotary switch mounted in a Control Box. This, however, is unnecessary when continuous rotation only is required.

COLOUR CHANGE WHEEL AND DRIVE

The driving unit consists of a uni-directional self-starting synchronous motor suitable only for a 50 or 60~ A.C. supply (specify voltage). The wheel has five apertures for 'Cinemoid' colour filters and is fixed to the driving shaft by means of a milled nut. Speed—four revolutions a minute.* Each Colour Change Wheel must have a separate set of switch-contacts at the Control Box.

Ref. 382 Motor driven colour change wheel for Patt. 23, 23F, or 23W. Diameter 12in. (305mm). Weight 2½lb (1.1kg).

Ref. 400 Ditto for Patt. 23N/RH. Diameter 17½in. (445mm). Weight 5½lb (2.5kg).

Ref. 410 Ditto for Patt. 123. Diameter 17½in. (445mm). Weight 5lb (2.3kg).

Ref. 388 Set of five 'Cinemoid' filters for 382 above.

Ref. 390 Set of five 'Cinemoid' filters for 400 or 410 above.

* Suffix -/S as above but 1 RPM instead of 4 RPM

CONTROL BOXES

Control boxes consist of a wall mounting sheet metal box with the requisite number of rotary switches, with internal wiring to a terminal block. Five of the positions of each switch are numbered 1—5 and each selects the corresponding aperture at the colour-change wheel which rotates until the chosen colour is brought to rest before the lens of the spotlight. The sixth position of the switch marked C provides continuous rotation. A neon lamp above each switch remains alight while the motor is in operation. A master switch, permitting the presetting of individual controls, is fitted on Control Boxes for 4 ways and above.

Ref. 383 1 way Control Box for 382, 400 or 410 above.

Ref. 384 2 " " " " " " " "

Ref. 385 4 " " " " " " " "

Ref. 389 6 " " " " " " " "

Ref. 386 8 " " " " " " " "

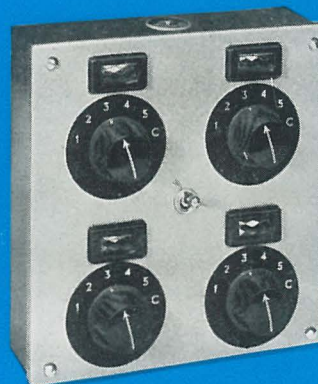
Ref. 387 12 " " " " " " " "



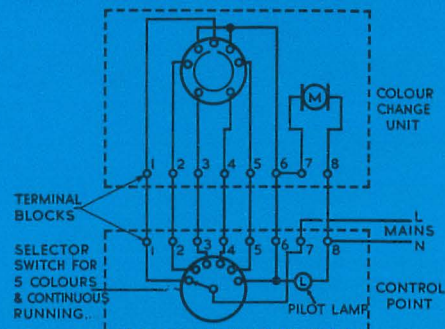
Patt. 23/RH with motor driven colour change wheel



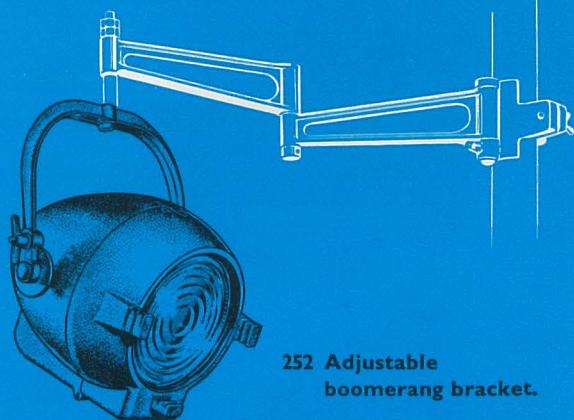
Patt. 123 with motor driven colour change wheel



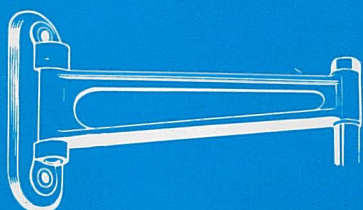
4-way control box for remote colour change



Patt. 23 & 123 BRACKETS & FIXINGS



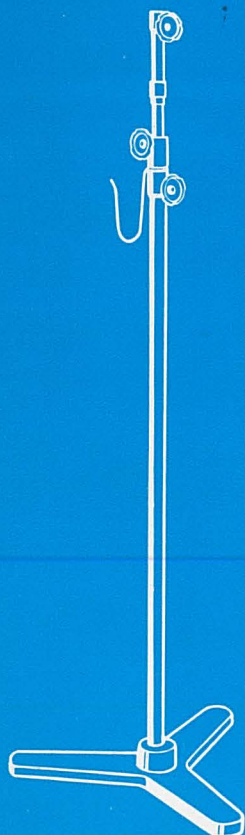
252 Adjustable boomerang bracket.



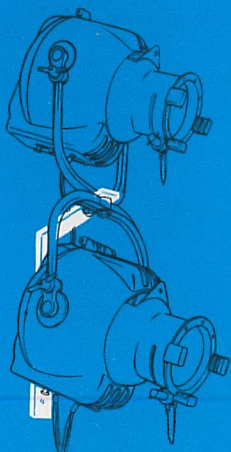
247 Swivel arm wall bracket.



483 Hook type clamp.



66 Standard telescopic stand.



238 "L" shaped bracket for two lanterns.

BRACKETS

- 247 Swivel arm wall bracket (reach 10 inches).
- 248 Ditto, with extension arm (reach 19 inches).
- 251 Adjustable boomerang bracket for 2-in. ext. dia. barrel (reach 10 inches).
- 252 Ditto, with extension arm (reach 19 inches).
- 195 Adaptor for $\frac{3}{8}$ -in. bolt as supplied with brackets 247, 248, 251 and 252 (spare).
- 485 Adaptor for 247 and 251 brackets to take two lanterns, one up and one down.
- 486 As 485 above but longer to take lanterns side by side.
- 238 'L' shaped bracket non-swivelling for two lanterns, one up and one down.
- 255 Fixed boomerang bracket for 2-in. ext. dia. barrel (reach 11 inches).

CLAMP AND SAFETY CHAIN

- 483 Hook type clamp for 2-in. ext. dia. barrel.
- 64 Safety chain, 22-in. long, with clip hook.

BASES AND STANDS

- 367 Cast-aluminium ceiling plate or base, 6-in. dia. (not for wall mounting).
- 484 Spigot adaptor for $\frac{3}{8}$ -in. Whit. bolt required when lantern is used in telescopic stand.
- 257 Miniature telescopic stand with cable hook and swivelling collar (min. height 3 ft. 7 in., max. height 5 ft. 9 in.) Nett weight 15 lb.
- 66 Standard telescopic stand with cable hook and swivelling collar (min. height 4 ft. 3 in., max. height 7 ft.) Nett weight 37 lb.

NOTE ON STAGE LIGHTING TRUNNIONS

Patts. 23 and 123 trunnions are now fitted with $\frac{3}{8}$ -in. Whit. bolt so that the lanterns can be fixed compactly to the new 483 Hook clamp. Trunnions with the $\frac{3}{8}$ -in. bolt need a Ref. 484 spigot adaptor when used on any stand. Brackets Ref. 247, 248, 251 and 252 are supplied with a special Ref. 195 adaptor to enable them to take lanterns with the $\frac{3}{8}$ -in. bolt. Also available with BS Studio Spigot. See page 5.

Spares and accessories

PATT. 23, 23F, 23W

- 359 Spare metal colour frame 4-in. square.
- 359/C 'Cinemoid' cut to size for 359 frames.
- 359/CF Frame with 'Cinemoid'.
- 376 Hand operated colour wheel.
- 377 Set of five 'Cinemoid' colours cut to size for 376 colour wheel.
- 374 Slatted diffusing glass in metal frame.
- 310 Spare 3½ in. by 5-in. focus H.R. lens.
- 411 Spare 3½-in. by 5-in. focus Fresnel lens.

PATT. 23N

- 284 Spare metal colour frame 7¾-in. square.
- 284/C 'Cinemoid' cut to size for 284 frames.
- 284/CF Frame with 'Cinemoid'.
- 375 Slatted diffusing glass in metal frame.
- 304 Spare 6-in. by 9-in. focus lens.

PATT. 23 (all types)

- 357 Spare 7-in. diameter rear reflector.
- 358 Spare 7-in. diameter front reflector.

PATT. 23 (all types except -/S).

- 362 Set of four fixed aperture diaphragms.
- 364 Adjustable straight edge mask.
- 363 Iris diaphragm.
- 512 Mica 'Cloud' Slide.

PATT. 123, 123W

- 401 Spare metal colour frame 6½-in. square.
- 401/C 'Cinemoid' cut to size for 401 frames.
- 401/CF Frame with 'Cinemoid'.
- 132 Four-door rotatable barndoor shutter.
- 131 Four-door rotatable barndoor shutter for pole operation.
- 404 Spare 6-in. short focus Fresnel lens.
- 503 Spare 6-in. wide angle Fresnel lens.
- 435 Spare 4½-in. diameter reflector.

PATT. 123 and 23

- 493 Spare P.28 lampholder.

PATT. 23 CONVERSIONS

*Patt. 23 to Patt. 23N. Discard front tube and use:
Ref. 355. Lens tube with lens and colour frame.*

*Patt. 23 to Patt. 23W. Insert additional:
Ref. 310. Lens 3½-in. diam. by 5-in. focus H.R.*

*Patt. 23N to Patt. 23. Discard front tube and use:
Ref. 356. Standard tube with lens and colour frame.*

Conversion to built in shutter —/S or to rear handle —/H types is not possible. These must be regarded as different models.

THE STRAND ELECTRIC
LIGHTING FOR



& ENGINEERING CO. LTD.
ALL ENTERTAINMENT

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