



# TRADE DISCOUNT

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The Discounts indicated by the Code letter in our Catalogue are only allowed on condition that goods are sold at Retail Prices as specified in our list. We do not allow Trade Discounts to users, and to protect the interests of legitimate dealers, we require reasonable proof from persons or firms claiming trade discount, that they are dealing in the class of goods on which discount is allowed.

## DISCOUNT CODE.

Our code word is "CINEMA." One of these letters will be found against each article in the Catalogue, which indicates the following Discounts :—

C	I	N	E	M	A
33 $\frac{1}{3}$ %	25%	20%	15%	10%	5%

2 $\frac{1}{2}$ % Settlement Discount, 28 days. Otherwise strictly nett.

Special Quotations will be given for Quantity Orders.

SEPTEMBER 1934.



# CINEMA TRADERS

LTD

INCORPORATING JOHN WRENCH & SONS

TELEPHONE:  
GERRARD 5287-8

TELEGRAMS:  
BIOCINEMA, RATH  
LONDON

SCIENTIFIC AND  
ILLUMINATING  
ENGINEERS

CONTRACTORS TO:  
CROWN AGENTS FOR  
COLONIES, INDIA OFFICE,  
L.C.C. AND OTHER  
COUNCILS

26, CHURCH STREET, CHARING CROSS ROAD  
LONDON, W.1

SEPTEMBER 1935

DEAR SIRs,

WITH COMPLIMENTS - OUR NEW CATALOGUE.

POCKET SIZE, COMPLETE IN COVER,

BUT SO ARRANGED THAT YOU CAN REMOVE THE SECTIONS FOR  
IMPARTING INFORMATION TO YOUR CUSTOMER WITHOUT  
DISCLOSING THE NAME OF YOUR SUPPLIERS.

UPON PERUSAL YOU WILL FIND

ALL LANTERNS RE-DESIGNED,

IMPROVED FOCUSLITE OUTFITS,

NEW OAK LANTERN STANDS,

IN FACT, THERE ARE SO MANY IMPROVEMENTS, THAT IT IS NOT  
POSSIBLE TO MENTION THEM ALL IN A LETTER.

WE SHALL BE PLEASED TO LET YOU HAVE  
HALF A DOZEN COPIES OF EACH SECTION, WITHOUT COVERS, OR  
SUPPLY YOU IN QUANTITIES OF 50 OR 100 AT ONE THIRD OF  
PRINTERS' COST.

WHY NOT HAVE A SUPPLY, AND ATTACH YOUR  
OWN COVER ?.

WE ARE READY TO GIVE YOU EVERY ASSISTANCE,  
AND MAY WE LOOK FORWARD TO TRANSACTING BUSINESS WITH YOU,  
AND MAKE IT A RECORD SEASON.

WE ARE,

YOURS FAITHFULLY,

CINEMA TRADERS LIMITED.

Section

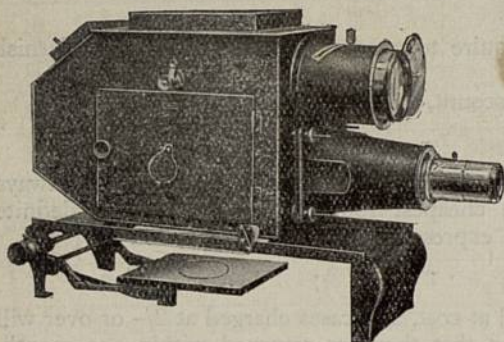
No.

34

33 1/3

EPIDIASCOPIES

OPTICAL LANTERNS



LANTERN and SCREEN STANDS

OPAQUE SCREENS - SILVER SCREENS

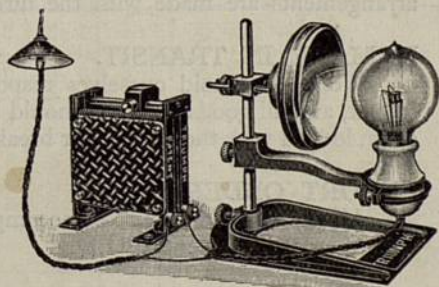
TRAVELLING CASES

FOCUSLITE

OUTFITS

PROJECTOR

LAMPS



RESISTANCES - TRANSFORMERS

and All Accessories

W.D.  
8°  
930  
BR





## TERMS OF BUSINESS.

All prices in our list are subject to revision without notice, but we will endeavour to maintain these prices for season 1934-35.

We reserve the right to depart from the specifications and illustrations without notice.

### ACCOUNTS.

Customers who require to open credit accounts should furnish two trade references.

2½% settlement discount, 28 days, otherwise strictly nett.

### CARRIAGE.

All carriage charges are payable by the customer, and we always despatch goods by the cheapest route, unless we receive definite instructions to send by express post or passenger train.

### PACKING.

All packing charged at cost, and cases charged at 2/- or over will be credited on condition that they are returned within one month, carriage paid.

### RETURNS.

Any goods supplied to a definite order cannot under any circumstances be accepted back for credit.

### APPROVAL.

We regret we cannot supply any goods on approval, unless special arrangements are made with the directors in writing.

### DAMAGE IN TRANSIT.

We do not hold ourselves responsible for damage to goods in transit, and all goods received should be immediately examined, and a claim lodged with the Carrier for breakage, within 24 hours of delivery.

### EXPORT ORDERS.

All export orders must be accompanied by full remittance, otherwise they will be sent C.O.D.

### SHIPPING CHARGES.

All Shipping Charges, Customs Duties, Insurances, etc., extra.

ORDERS ARE ONLY EXECUTED ON ABOVE CONDITIONS.

## REFERENCE TABLES

showing at a glance the Focus of Lens required to give a certain size picture at a given distance from the screen.

### TABLE FOR LANTERN LENSES.

Screen Distance in feet	FOCUS OF LENS IN INCHES								
	6	8	10	12	14	16	18	20	
10	5. 0	3. 9	2.11	2. 6	1.10	1. 8	1. 8	1. 6	SIZE OF PICTURE
12	6. 0	4. 6	3. 6	3. 0	2. 6	2. 3	2. 0	1. 9	
15	7. 6	5. 8	4. 4	3. 9	3. 1	2. 9	2. 6	2. 3	
20	10. 0	7. 6	5.10	5. 0	4.12	3. 9	3. 4	3. 0	
25	12. 6	9. 4	7. 4	6. 3	5. 2	4. 8	4. 2	3. 9	
30	15. 0	11. 3	8. 9	7. 6	6. 3	5. 7	5. 0	4. 6	
35	17. 6	13. 1	10. 3	8. 9	7. 3	6. 7	5.10	5. 3	
40	20. 0	15. 0	11. 8	10. 0	8. 3	7. 6	6. 8	6. 0	
45	22. 6	16.10	13. 2	11. 3	9. 4	8. 5	7. 6	6. 9	
50	25. 0	18. 9	14. 8	12. 6	10. 4	9. 4	8. 4	7. 6	
60	30. 0	22. 6	15. 0	14. 8	11. 3	10. 0	10. 0	9. 0	

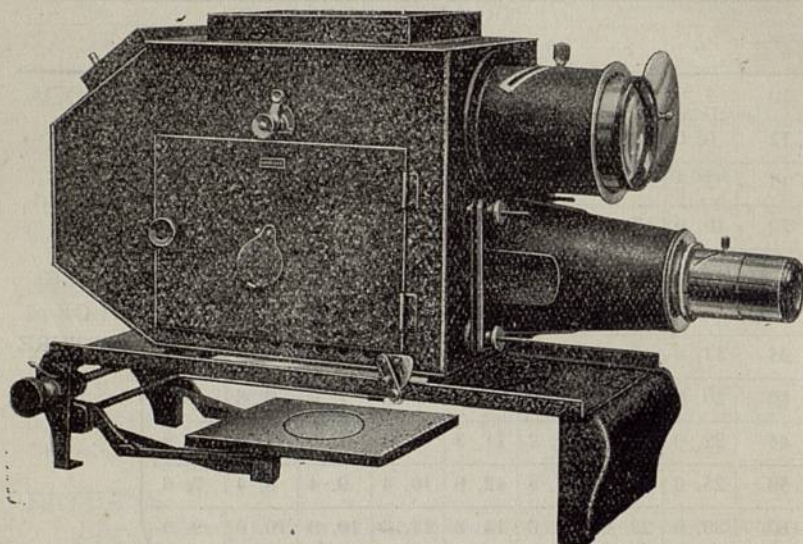
### TABLE FOR CINEMATOGGRAPH LENSES.

Screen Distance in feet	FOCUS OF LENS IN INCHES								
	2	2½	3	3½	4	4½	4¾	5	
10	4. 8	3. 9	3. 2	2. 8	2. 4	2. 1	2. 0	1.11	SIZE OF PICTURE
15	7. 0	5. 8	4. 8	4. 0	3. 6	3. 2	3. 0	2.10	
20	9. 5	7. 6	6. 3	5. 4	4. 8	4. 2	4. 0	3. 9	
25	11. 9	9. 5	7.10	6. 8	5.10	5. 3	4.11	4. 8	
30	14. 0	11. 3	9. 5	8. 0	7. 0	6. 3	5.11	5. 8	
35	16. 5	13. 2	10.11	9. 5	8. 2	7. 4	6.11	6. 7	
40	18. 9	15. 0	12. 6	10. 9	9. 5	8. 4	7.11	7. 6	
45	21. 1	16.11	14. 0	12. 1	10. 7	9. 5	8.11	8. 5	
50	23. 5	18. 9	15. 8	13. 5	11. 9	10. 5	9.10	9. 5	
60	28. 2	22. 6	18. 9	16. 0	14. 0	12. 6	11.10	11. 3	



## EPIDIASCOPE (N)

No. 26



Prices :

### EPIDIASCOPE

Complete with "Beck" Anastigmat Lens ( $4\frac{5}{8}$ " ) and Side Lamp-house.

£39 17 6

(Lamps extra).

Carrying Case if required ... .. £1 17 6

Resistance for using 110 volt 500 watt Lamps on  
200/250 volts ... .. £2 5 0

Class A1 Projector Lamps 500 watt should be used with this Outfit.

For prices see page 33.

## SPECIFICATION OF EPIDIASCOPE No. 25

The Lamp-house is of sheet steel, crystalline enamelled, fitted with helical jacket to take "Beck" Anastigmat lens. The lantern slide lens is our Standard No. 4 series approximately 8-in. focus.

The Object Mirror is silver surfaced and can be adjusted to any position. The Optical Mirror Reflector which is behind the lamp is specially designed for this work, and when correctly adjusted, increases the light considerably on the screen.

When projecting opaque objects, the bottom glass is removed. This allows the article that is being projected to stand on a revolving turntable so that it can be viewed from any angle. **This attachment is not fitted in any other make of Epidiascope.**

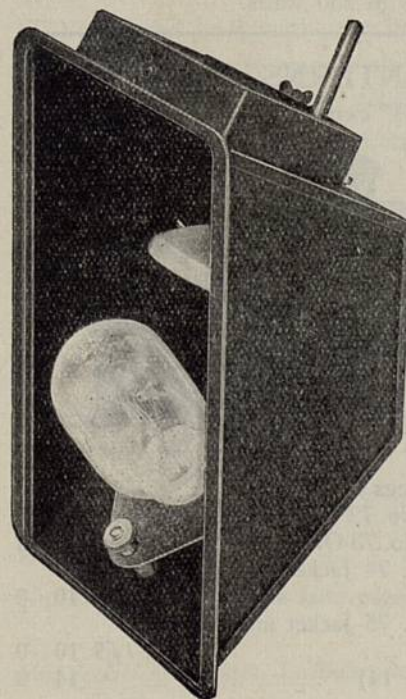
The Lifting Table is raised and lowered by an eccentric spindle at the back of the body, and is fitted with a ratchet, so that the table can be locked in any position and cannot slip down.

A large door is provided at the side and a smaller one at the back of the body, so that the lamp and reflector can be easily fitted or adjusted. The Reflector is mounted in a ball and socket joint ensuring every adjustment.

The aperture for photographs or books is 6-in. square. There is also an auxiliary mirror fitted inside the body which acts as a cut-off to the lantern slide attachment.

When showing slides, this mirror is lowered. The flap covering the top lens is lowered when not in use. Only one 500 watt lamp is necessary and good results are obtained at a throw of 20-35 feet, with a picture 10 feet square.

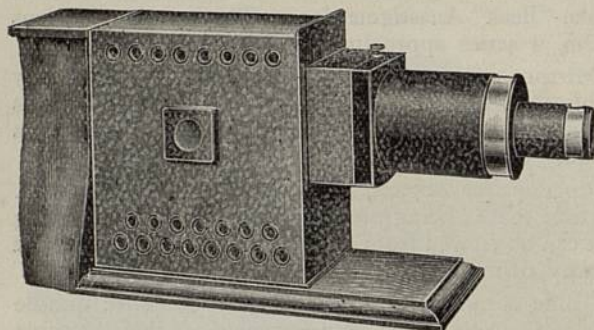
When greater illumination is required, the side lamp-house shown here, supplied with the outfit, can be brought into operation by installing another 500 watt lamp, and we strongly recommend the use of the extra lamp, especially where total darkness cannot be obtained.





## OPTICAL LANTERNS (C)

No. 27 (6" centre).



Price

£2 19 6

No. 27 Lantern with No. 80 Cylinder.

Fitted with Sliding Tube, No. 80 Lens Cylinder with 6" or 8" focus lenses, 2-4" Plano Lenses, Black Curtain. Lantern finished brown crystalline enamel, the whole mounted on oak base board.

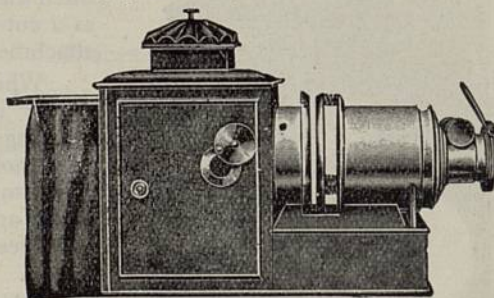
Will take Focuslite Outfits up to 250 watts.

## OPTICAL LANTERNS (C)

No. 28. (6½" centre).

These Lanterns are the old No. 15E and 15F pattern, and can only be supplied until the present stock is exhausted. Complete as specified below.

Suitable for Focuslite Outfits up to 500 watts.



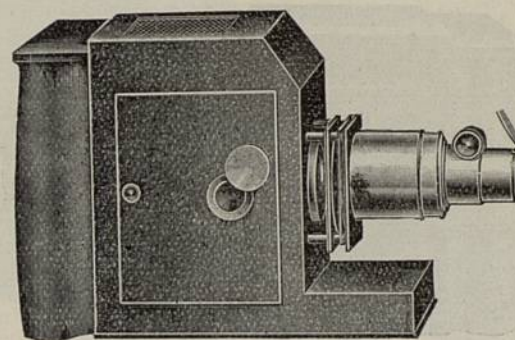
No. 28 Lantern with No. 72 Objective.

### Prices :

A. With Single Draw Tube and No. 72 Objective 6" focus	£6 5 0
B. " " " " " No. 73 Objective 7" focus	£7 2 6
C. With Three Draw Tube, No. 74 Jacket and No. 82 Cylinder	£8 10 0
D. With Three Draw Tube, No. 75 Jacket and No. 83 Cylinder	£9 10 0
No. 28 Travelling Case (see page 14)	14 0

## OPTICAL LANTERNS (C)

No. 29. (8" centre).



Very large body with interior dimensions 25" high, 12" long and 7½" wide, strongly made with Ventilated Top, large Side Door, with Eye-piece and Shutter. All Brass Ventilated Stage with Single Draw Tube (No. 2 thread), Large Black Curtain, 4½" Bi-convex and Meniscus Lenses.

Lantern body finished black crystalline enamel. Will take Focuslite Outfits up to 1000 watts and Arc Lamps Nos. 113, 114, 115.

### Prices :

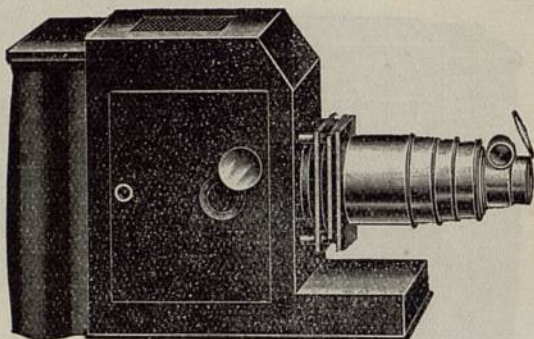
A. With No. 72 Objective 6" focus	... ..	£9 17 6
B. " No. 73 " 7" "	... ..	£10 15 0
C. " No. 76 Jacket and Cylinder 6" focus	... ..	£9 9 0
D. " No. 77 " " 7" "	... ..	£10 5 0
No. 29 Travelling Case (see page 14)	... ..	19 0

For details of Jackets, Cylinders and Objectives see page 16 and 17.



## OPTICAL LANTERNS (C)

No. 30. (8" centre).



The construction of this lantern is identical to No. 29 except that it is fitted with Telescopic Three Draw Tubes instead of Single Draw Tube, to enable longer focus lenses to be used than on the No. 29.

If Lenses are over 14" focus, Extension Tubes must be used, prices on page 18.

Will take Focuslite Outfits up to 1000 watts and Arc Lamps Nos. 113, 114, 115.

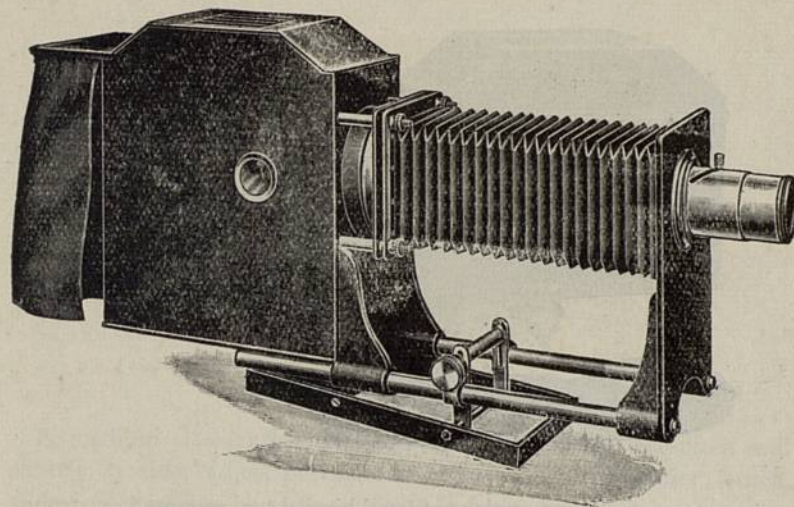
### Prices :

A.	With No. 74 Jacket and No. 82 Cylinder	6" to 18"	£12 5 0
B.	" No. 75 " " No. 83 "	7" to 18"	£13 5 0
C.	" No. 76 " " Cylinder	6" to 18" ...	£11 5 0
D.	" No. 77 " " " "	7" to 18" ...	£11 17 6
No. 30 Travelling Case (see page 14) ...			19 0

*For details of Jackets and Cylinders see pages 16 and 17.*

## OPTICAL LANTERNS (C)

No. 31. ( $6\frac{3}{4}$ " centre).



No. 31 Lantern with No. 79 Jacket and Cylinder.

The body of this Lantern has been re-designed and enlarged, fitted with best quality leather bellows, black curtain,  $4\frac{1}{2}$  bi-convex and meniscus lenses, a new combined adjustable jacket and cylinder either crystalline and polished nickel (No. 76 and 77) or a heavy chromium plated type (Nos. 78 and 79) for lenses up to 18" focus.

The whole body black crystalline enamel with other parts plated.

Will take Focuslite Outfits up to 1000 watts. Smart Travelling cases can be supplied if required.

### Prices :

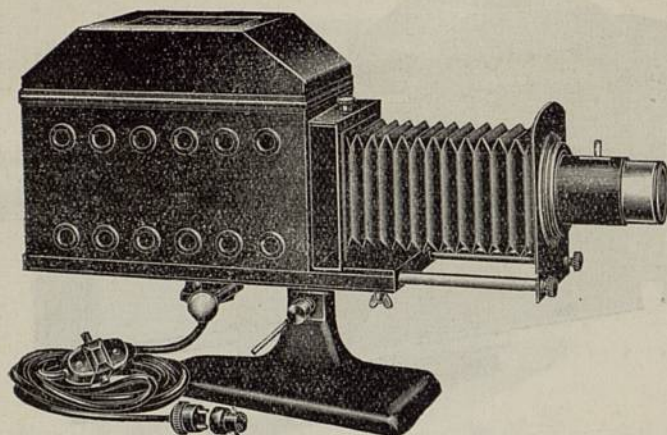
A.	With No. 76 Jacket and Cylinder, 6" to 18"	... £8 15 0
B.	" No. 77 " " " "	... £9 12 6
C.	" No. 78 " " " "	... £9 5 0
D.	" No. 79 " " " "	... £10 5 0
No. 31 Travelling Case (page 14) ...		19 0

*For details of Jacket and Cylinders see pages 16 and 17.*



## OPTICAL LANTERNS (C)

No. 36.



A very smart lantern with ventilated hinged top, mounted on strong, light base with tilting device, fitted with best quality leather bellows, and combined crystalline enamel jacket and plated cylinder (No. 76 or 77), with Focussing adjustment for lenses up to 12" focus. 2-4½ condenser lenses, slide carrier holder, E.S. lampholder fitted in adjustable jacket, 3 yards new pattern flex, 5 amp. switch, 2-pin B.C. adaptor, and 4" Mangin Mirror in Holder.

The whole lantern black crystalline enamel and plated.

Can be supplied with heavy all chromium plated best quality Jacket and cylinder No. 78 or 79 if required.

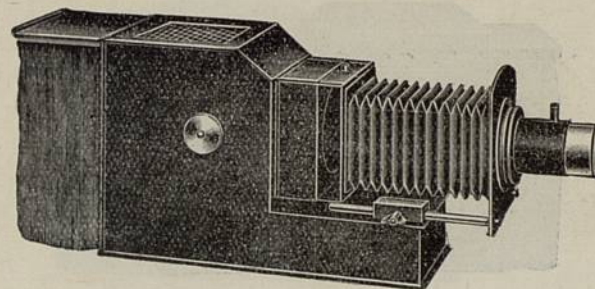
Will take projector lamps up to 250 watts. Smart travelling cases are available.

### Prices :

	Without Mirror	With Mirror
A. With No. 76 Jacket and Cylinder...	£6 12 6	£6 19 6
B. " No. 77 " " "	£7 8 6	£7 15 0
C. " No. 78 Chromium plated	£7 3 6	£7 10 0
D. " No. 79 " "	£7 18 6	£8 5 0
No. 36 Travelling Case (page 14)	14 0	14 0

## OPTICAL LANTERNS (C)

No. 37. (5½" centre).



A medium size lantern body with ventilated top, eye-piece and shutter at side, adjustable leather bellows, 2-4" condenser lenses, slide carrier holder, brass flange fitted in front shield to take objectives or jacket and cylinders specified below up to 10" focus, hinged flap at back with rod and fire-proof curtain.

Lantern finished in black crystalline enamel. Will take Focuslite Outfits up to 250 watts.

Smart cloth covered Travelling Case can be supplied if required.

### Prices :

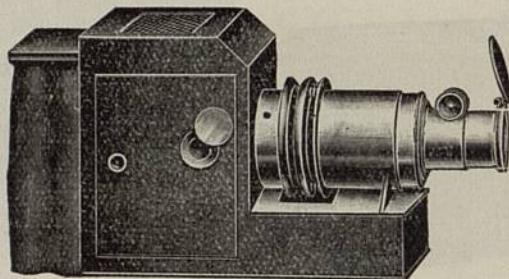
A. With No. 70 Objective...	£5 5 0
B. " No. 76 Jacket and Cylinder	£5 10 0
C. " No. 77 " " "	£5 19 6
No. 37 Travelling Case (page 14)...	13 0

For details of Objectives, Jackets and Cylinders see pages 16 and 17.



## OPTICAL LANTERNS (C)

No. 38. ( $6\frac{1}{2}$ " centre).



New type body with ventilated top, large side door with eye-piece and shutter, stage and front table made of brass, polished and lacquered.

Sliding tube fitted with brass flange (No. 2 thread), hinged flap at back with rod and fireproof curtain, 4" bi-convex and meniscus lenses.

Lantern body finished black crystalline enamel. Will take Focuslite Outfits up to 500 watts.

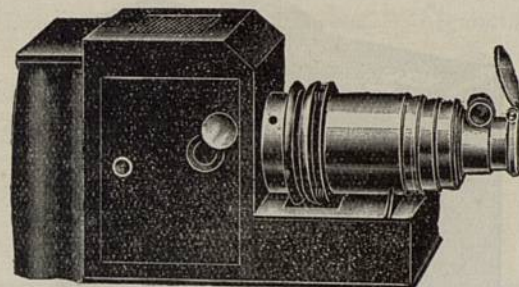
### Prices :

A.	With No. 72 Objective, 6" focus	...	...	...	£6 10 0
B.	„ No. 73 „ 7" „	...	...	...	£7 5 0
C.	„ No. 76 Jacket and Cylinder, 8" focus	...	...	...	£6 0 0
D.	„ No. 77 „ „ 8" „	...	...	...	£6 15 0
No. 38 Travelling Case (page 14)...					14 6

*For details of Objectives, Jackets and Cylinders see pages 16 and 17.*

## OPTICAL LANTERNS (C)

No. 39. ( $6\frac{1}{2}$ " centre).



New type body with ventilated top, similar in construction to Lantern No. 38 except that the single draw tube is replaced by a set of three draw telescopic tubes suitable for lenses up to 14" focus (No. 2 thread), hinged flap, rod and black curtain at back.

Lantern body black crystalline enamel. Will take Focuslite Outfits up to 500 watts.

If lenses over 14" focus are required, Extension Tubes must be added (prices on page 18).

### Prices :

A.	With No. 76 Jacket and Cylinder, 6" to 14" focus	£7 17 6
B.	„ No. 77 „ „ 7" to 14" „	£8 10 0
C.	„ No. 74 „ and No. 82 „ 6" to 14" „	£8 15 0
D.	„ No. 75 „ and No. 83 „ 7" to 14" „	£9 12 6
No. 39 Travelling Case (page 14)...		14 6

*\*For details of Jackets and Cylinders see pages 16 and 17.*



## TRAVELLING CASES (C)

A New Departure in Lantern Cases.

NO MORE HEAVY METAL CASES.



A smart selection of carrying cases in three sizes suitable for all purposes, but have been designed for lanterns listed in this catalogue.

Made of strong wood, covered outside with black pebble cloth, lined inside with green baize, plated metal corners, hinges and fasteners, strong black handle and two keys.

Suitable for Lanterns as numbered below.



### Prices :

No. 28 (page 6)	Size	19"×14"×6½"	...	...	...	14/-
No. 29 ( " 7)	"	20½"×16½"×8½"	...	...	...	19/-
No. 30 ( " 8)	"	20½"×16½"×8½"	...	...	...	19/-
No. 31 ( " 9)	"	20½"×16½"×8½"	...	...	...	19/-
No. 36 ( " 10)	"	19"×14"×6½"	...	...	...	14/-
No. 37 ( " 11)	"	19"×10¾"×6½"	...	...	...	13/-
No. 38 ( " 12)	"	19"×14"×6½"	...	...	...	14/-
No. 39 ( " 13)	"	19"×14"×6½"	...	...	...	14/-

IDEAL WEEK-END CASES.

## CONDENSER LENSES (C)

For use with Cinematograph Machines, Optical Lanterns, Lime Boxes, Stage Projectors, Spotlights, Spot Attachments.

	Dia.	Plano	Bi-Convex	Meniscus	
	2½"	4/6	6/-	7/6	
	4"	5/-	5/6	5/6	
	4½"	6/-	7/-	7/-	
	4¾"	6/-	7/6	7/6	
Biconvex & Meniscus.					Plano Convex

## PLANO CONVEX LENSES (C)



4" dia., 9" focus ...	5/6	6" dia., 8" focus ...	15/-
5" dia., 9" focus ...	7/6	6" dia., 10" focus ...	12/6
6" dia., 9" focus ...	14/6	6" dia., 12" focus ...	11/6

## CONDENSER MOUNTS (C)

2½" dia. ...	6/6	4¼" dia. ...	8/6	5" dia. ...	15/6
4" dia. ...	7/-	4½" dia. ...	8/6	6" dia. ...	18/6

## CURTAINS (C)

For Back of Lanterns:

Asbestos	22"×16"	...	5/9
Black	14"×14"	...	2/6
Fireproof	14"×11"	...	1/6

## TRAYS (C)

Black Enamelled Tin Tray

with Post

Price 1/9

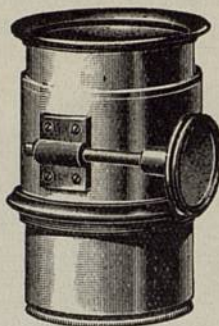


## OBJECTIVES FOR OPTICAL LANTERNS (C)

**No. 70 Objective.**  
Fitted with 2" dia.  
Lenses (No. 1 thread)

6" focus ... £1 7 6

Over 6" focus £1 10 0



No. 70 Objective.

**No. 71 Objective.**

Similar to No. 70 but  
fitted with Sliding  
Shutter. (No. 1  
thread).

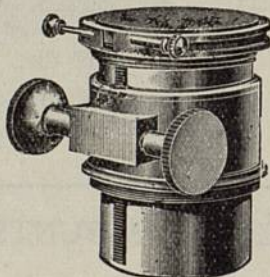
6" focus ... £1 11 6

Over 6" focus £1 14 0

## OBJECTIVES FOR OPTICAL LANTERNS (C)

**No. 72 Objective.**  
Fitted with 2" dia.  
Lenses, Rack and  
Pinion Movement  
and Hinged Flap  
Shutter (No. 2  
thread).

6" to 18" focus  
£1 18 6

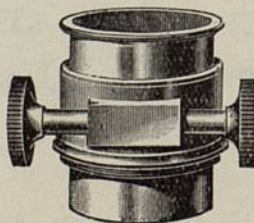


**No. 73 Objective.**  
Similar to No. 72  
but fitted with 2 3/8" dia. Lenses (No. 2  
thread).

7" to 18" focus  
£2 12 6

## RACK JACKETS (C)

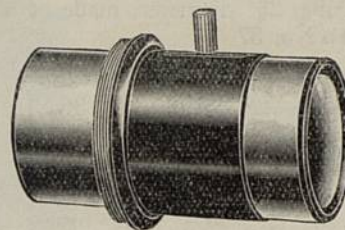
**No. 74 Jacket.**  
To carry No. 80 or  
82 Lens Cylinder.  
£1 2 6



**No. 75 Jacket.**  
To carry No. 81  
or 83 Lens Cylinder.

£1 7 6

## JACKETS AND CYLINDERS (C).



A new combined Jacket and Cylinder fitted with 2" or 2 3/8" dia. Lenses 6" to 20" focus. Three patterns are available, Brass Lacquered Jacket and Polished Cylinder, Crystalline Enamel Jacket and Plated Cylinder, or Heavy All Chromium Plated Jacket and Cylinder. All patterns are made with simple focussing adjustment.

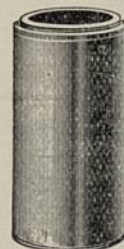
	Lacquered Jacket Polished Cylinder	Crystalline Jacket Plated Cylinder	Heavy Chromium Plated
No. 76 (2")	35/-	35/-	45/-
No. 77 (2 3/8")	47/6	47/6	57/6

Suitable for all Lanterns except No. 27.

## LENS CYLINDERS (C).

**No. 80**—Fitted with 2" dia. Lenses 6" to  
20" Focus ... .. £1 5 0  
(Fits No. 74 jacket)

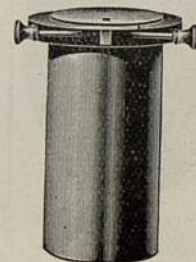
**No. 81**—Fitted with 2 3/8" dia. Lenses 7" to  
20" Focus ... .. £1 18 6  
(Fits No. 75 jacket)



## LENS CYLINDERS (C).

**No. 82**—Fitted with 2" dia. Lenses  
and Hinged Flasher (fits  
No. 74 Jacket) 6" to 20"  
focus ... .. £1 10 0

**No. 83**—Fitted with 2 3/8" dia. Lenses  
and Hinged Flasher (fits  
No. 75 Jacket) 7" to 20"  
focus ... .. £2 2 0





## EXTENSION TUBES (I)

No. 1. Extension Tube,  $2\frac{3}{8}$ " diameter, made of brass and threaded for Lantern No. 37

No. 2. Extension Tube, 3" diameter, as above but threaded for Lanterns. Nos. 28, 29, 30, 31, 36, 37, 38, 39.

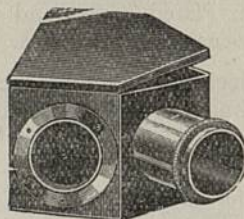
	Length	2"	3"	4"	6"
No. 1 ...	...	6/6	7/-	7/6	8/6
No. 2 ...	...	8/-	8/6	9/6	10/6

### FLANGES (I)



No. 1 Thread 5/6  
No. 2 Thread 7/6

### APHENGESCOPE (I)



Made in japanned tinned iron and fitted with brass flange to carry Objective.

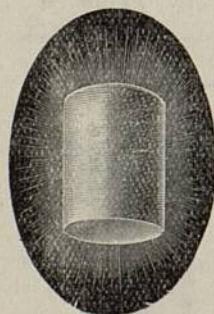
Price 15/-

### ADAPTOR (I)



No. 2 Thread  
to  
No. 1 Thread  
5/6

### LIME PASTILS (C)



Large size 3/6  
Small size 3/-

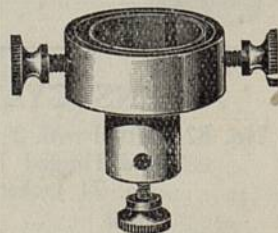
### LIMES (C)



Best quality Hard Limes in sealed tins.

6 in Tin (large) ... 4/-  
12 in Tin (small) ... 5/-

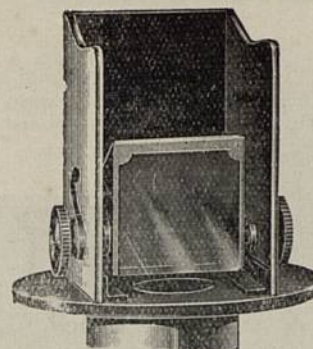
### PASTIL HOLDER (C)



Ferrule pattern  
2/6

## PRISMS (for Demonstrator Lanterns) (I)

No. 84

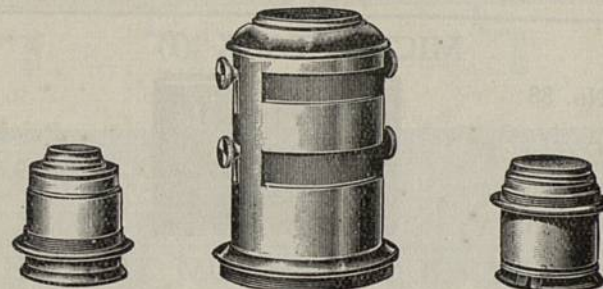


Silvered Prism for reflecting or erecting purposes for use with No. 23A Lantern. Fits on 4D Lens Cylinder.

Price £6 6 0

## PROJECTION MICROSCOPES (I)

No. 85

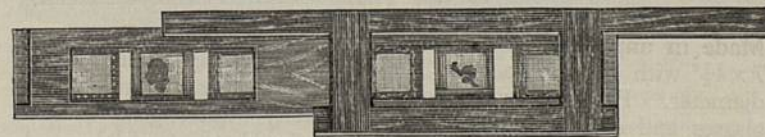


No. 1 Projection Microscope. Made to screw on to the flange of the sliding tube of the lantern body in place of the objective. Made of brass, highly polished and lacquered, with two slots and diaphragm, mounted on internal spring. This holds the slide, live box or animalculae tank, in position. Complete with two powers, 1-inch and  $\frac{1}{2}$ -inch non-achromatic, mounted in sliding tubes. (No. 2 Thread).

Price £2 5 0

## MICRO. SLIDE CARRIER (I)

No. 86

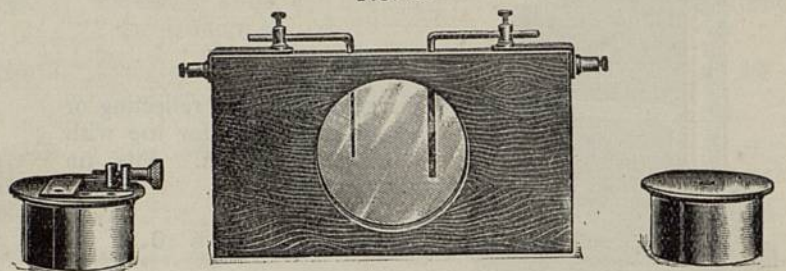


For 3" x 1" Microscopic Slides ... .. Price 4/-



## NOZZLES AND ELECTROLYTIC TANK (I)

No. 87



Parallel  
Beam Nozzle  
Price £1 5 0

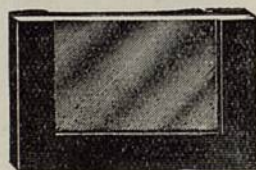
Electrolytic Tank  
Similar to No. 1 Chemical  
Trough, but fitted with ter-  
minals and copper electrodes.  
Price 15/-

Pencil  
Beam Nozzle  
Price 7/6

## MICRO. TANK (I)

No. 88

Made entirely of glass,  
suitable for  
No. 1 Projection  
Microscope.



Price  
19/6

## CHEMICAL TROUGH (I) ALUM TROUGH (I)

No. 89.

No. 90.



Made in unpolished mahogany  
 $7 \times 4\frac{1}{2}$ " with circular opening 3"  
diameter. Provided with two  
glasses and separated by stout  
india rubber.  
Price 6/6



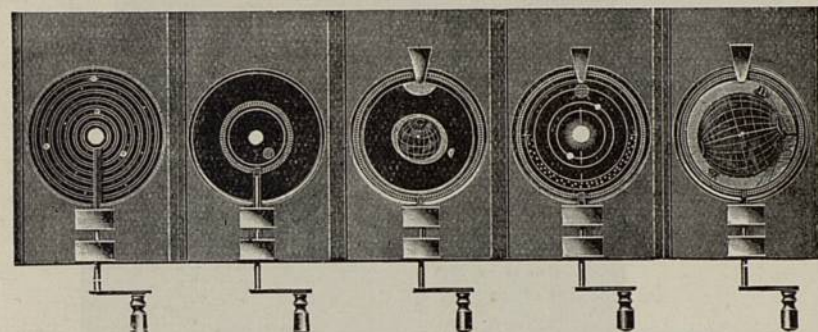
Made of glass and bound at the  
edges with japanned tinned iron,  
absolutely watertight. Size  
 $7 \times 4\frac{1}{2} \times \frac{5}{8}$ " (inside).  
Price £1 1 0

## RACKWORK ASTRONOMICAL SLIDES (I)

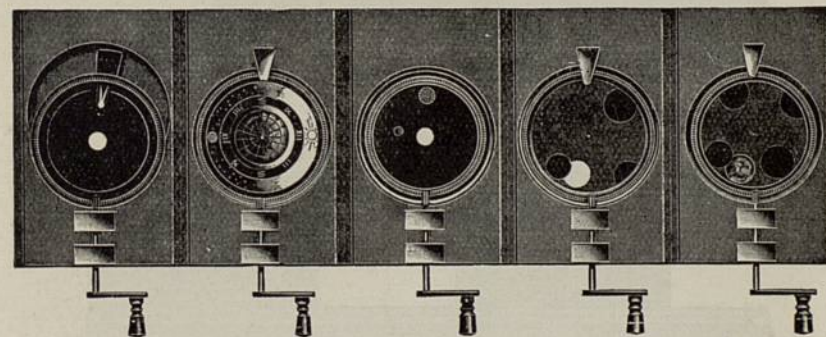
No. 91

A comprehensive series of mechanical slides for illustrating the science of  
physiography. They are carefully made, and the movements are accurately  
timed so as to work in correct ratios. The slides have 3-inch diameter pictures,  
hand painted, carefully coloured, and are carried in unpolished mahogany frames

No. A No. B No. C No. D No. E



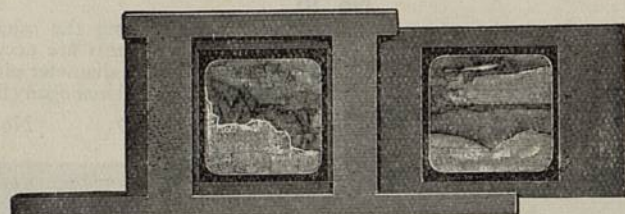
No. F No. G No. H No. I No. J



	Price each
No. A—The Solar System, showing the revolution of all the Planets with their Satellites round the Sun ...	1 8 6
No. B—The Earth's annual motion round the Sun, showing the parallelism of its axis, producing the seasons ...	1 1 0
No. C—To illustrate the cause of Spring and Neap Tides and show the Moon's phases during its revolution ...	13 6
No. D—To illustrate the apparent direct and retrograde motion of Venus and Mercury, and also their stationary appearance ...	13 6
No. E—To prove the Earth's Rotundity ...	13 6
No. F—To illustrate the eccentric revolution of a Comet round the Sun, and show the appearance of its Tail at different points of its orbit ...	1 3 0
No. G—The Diurnal Motion of the Earth, showing the Rising and Setting of the Sun, illustrating the cause of Day and Night ...	13 6
No. H—To illustrate the Annual Motion of the Earth round the Sun, with the monthly lunations of the Moon ...	1 8 6
No. I—To show the various Eclipses of the Sun, with the Transit of Venus ...	13 6
No. J—To show the various Eclipses of the Moon ...	13 6
COMPLETE SET OF 10 SLIDES ...	8 17 6

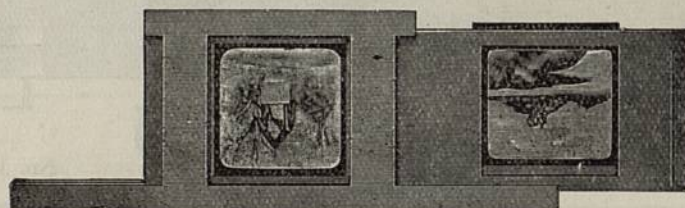


## SLIDE CARRIERS (C)



No. 92. Double Sliding Carrier, for  $3\frac{1}{4}'' \times 3\frac{1}{4}''$  Slides.

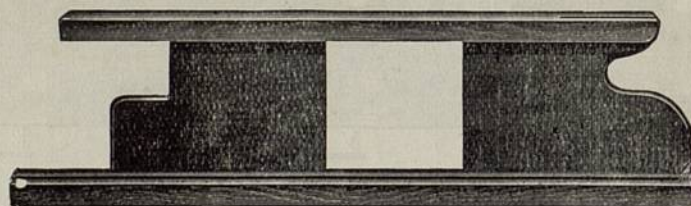
Price 3/-



Double Sliding Carrier with Lifter.

No. 93 ( $3\frac{1}{4}'' \times 3\frac{1}{4}''$  Slides) 4/-

No. 94 ( $4'' \times 3\frac{1}{4}''$  Slides) 4/6



No. 95. "Push-Thro" Carrier.

Improved type, takes  $3\frac{1}{4}'' \times 3\frac{1}{4}''$  and  $4'' \times 3\frac{1}{4}''$  Slides.

Price 3/6

## ECLIPSE CARRIERS.

Wooden Pattern	15/-	Brass Faced	17/6	Aluminium	42/-
Self-centreing	18/-	Self-centreing	20/-	Self-centreing	45/-

## SLIDE BOXES (C)

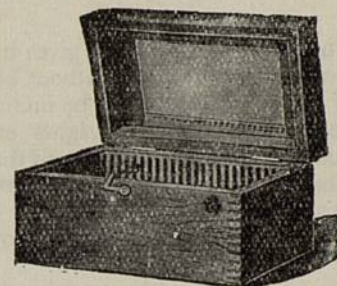
No. 96

### GROOVED SLIDE BOXES

Superior Dovetailed Boxes, made of American white wood, with grooves and numbers.

These boxes are only intended for storing slides.

Made to hold 24, 50 and 100 slides.



### Prices :

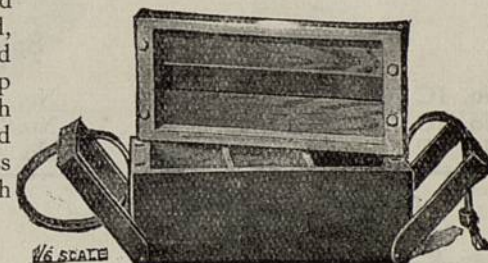
	Size 24	Size 50	Size 100
For $3\frac{1}{4}'' \times 3\frac{1}{4}''$	4/6	5/6	9/-
For $4'' \times 3\frac{1}{4}''$	6/6	7/6	11/-

## TRANSIT BOXES (C)

No. 97

Tongued and screwed American white wood, stained black, with padded removable partitions, top and bottom fitted with rubber pads, led secured by three dowels, and brass catches, fastened with strong leather strap.

To carry 75 slides.



### Prices :

	With Metal Clasps	Without Clasps
$3\frac{1}{4}'' \times 3\frac{1}{4}''$ Slides ... ..	7/-	5/-
$4'' \times 3\frac{1}{4}''$ Slides ... ..	10/-	8/-

## SLIDES MADE TO ORDER (E)

Special announcements and advertisements.

	FIRST COPY		REPEAT COPIES	
	Black and White FROM	Coloured FROM	Black and White FROM	Coloured FROM
Designing and making up	4/-	5/-	2/-	3/-
From Prints ... ..	2/6	3/6	1/3	2/3
From Negatives ... ..	1/9	2/9	1/-	2/-



### ACETYLENE] GENERATOR (C)

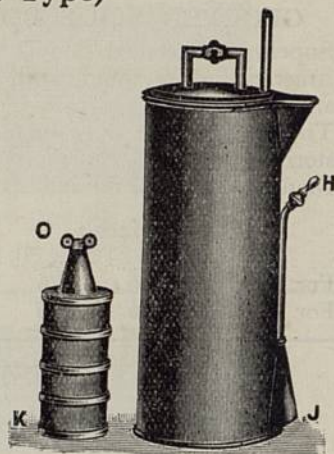
#### (Displacement Type)

This type of Generator gives gas at a steady even pressure, without bobbing of lights. Pressure can be increased if desired by placing weights on gas-holder, but it is usually found that they work normally at sufficient pressure.

No. 1C will work 4-burner jet for one hour.

No. 2C will work 4-burner jet or oxy-acetylene jet for  $2\frac{1}{4}$  hours.

No. 4C will give sufficient gas for two shows a night, 4 to 5 hours.

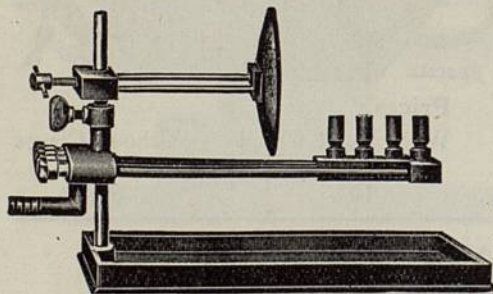


Prices :

No.	1C	...	...	$\frac{f}{s}$	s.	d.
No.	1C	...	...	1	15	0
No.	2C	...	...	2	15	0
No.	4C	...	...	4	5	0

### Spare Carbide Holders.

No.	1C	2C	4C	£	s.	d.
No. 1C	...	...		11	6	
No. 2C	...	...		15	6	
No. 4C	...	...		1	2	0



## ACETYLENE JETS (C)

Jets, Reflector and Tray ... ..	21/-
Jet and Reflector	19/6
Jet only ... ..	16/-
Reflector and Lamp	4/-

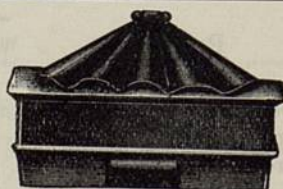
### LANTERN COWLS (C)

As illustrated, standard size,

$$5\frac{9}{16}'' \times 2\frac{3}{8}''.$$

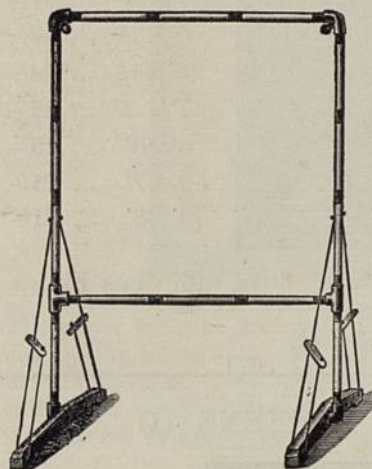
Price 3/-

Other sizes made to order only.



### SCREEN STANDS (C)

### Sizes and Prices.



Each set of Screen Supports consists of 4 metal Angle Pieces, Pine Rods as per list, pair of Supports with Guy Ropes and Cleats, complete in black wood boxes.

(Elevators extra as per List).

When ordering please state whether  
1" or 1 $\frac{1}{4}$ " Rods are required.

*Illustration shows Screen Stand with Elevators.*

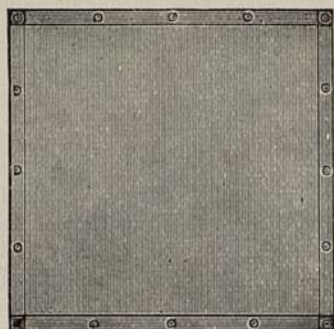
No.	Size of Screen	Each Frame consisting of Pine Rods as under	1-inch Rods	1½-inch Rods
1	6-ft. × 6-ft.	4 4-ft. and 4 2-ft.	3 10 0	3 19 6
2	8-ft. × 8-ft.	8 4-ft.	3 15 0	4 5 0
3	10-ft. × 10-ft.	8 4-ft. and 4 2-ft.	4 10 0	5 5 0
4	12-ft. × 12-ft.	12 4-ft.	5 5 0	5 17 6
5	14-ft. × 14-ft.	12 4-ft. and 4 2-ft.	5 15 0	6 10 0
Elevators, consisting of 2 T pieces and 2 2-ft. rods			17/6	20/-
Angle Pieces (per pair) ... ..			10/-	11/-
T Pieces (per pair) ... ..			15/-	17/-
2-ft. Rods with Brass Ferrules ... ..			4/-	5/6
4-ft.    "       "       "       "     ... ..			6/-	7/6
6-ft.    "       "       "       "     ... ..			7/-	8/6
2-ft. Elevator Rods (per pair) ... ..			2/6	3/6
4-ft.       "       "       "       "     ... ..			4/-	5/-
Cleats (per set of 4)     ... ..			1/6	1/9

Pointers (8-ft. in 2 sections), 9/6



## CALICO SCREENS (C)

5' x 5' ...	14/-
6' x 6' ...	15/6
7' x 7' ...	19/6
8' x 8' ...	25/-
9' x 9' ...	32/6
10' x 10' ...	39/-
12' x 12' ...	47/6
14' x 14' ...	69/-
16' x 16' ...	87/6



3½' x 2½' ...	8/6
4' x 3' ...	10/6
5' x 4' ...	12/-
6' x 4½' ...	14/-
7' x 5' ...	15/-
8' x 6' ...	18/-
9' x 7' ...	25/-
10' x 8' ...	31/-

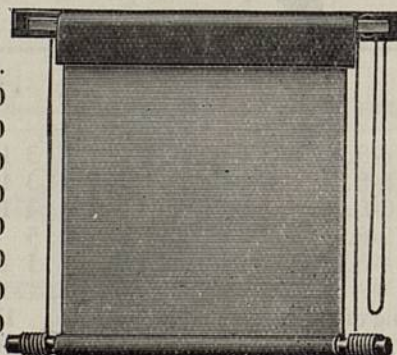
Made of best material, hemmed all round, fitted with Brass Eyelets or Tapes.

*Delivery from stock.*

## WHITE OPAQUE SCREENS (I)

Without Box

	£	s.	d.
5' x 5'	2	5	0
6' x 6'	2	10	0
7' x 7'	3	0	0
8' x 8'	3	10	0
9' x 9'	4	4	0
10' x 10'	5	0	0
12' x 12'	7	10	0
14' x 14'	10	0	0



With Box

	£	s.	d.
5' x 5'	3	9	0
6' x 6'	4	0	0
7' x 7'	4	14	0
8' x 8'	5	8	0
9' x 9'	6	4	0
10' x 10'	7	0	0
12' x 12'	9	15	0
14' x 14'	13	0	0

Made of very strong material, fitted with Roller and Batten, provided with Cords and Pulleys, Waterproof Cover, and supplied in boxes if required.

*Sizes up to 10 feet delivered from stock.*

*Screens in boxes delivery 7 days.*

## OPAQUE SCREEN PAINT (I)

¼ Gall. ...	15/-	½ Gall. ...	25/-	1 Gall. ...	45/-
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## SILVER SCREENS (C)



The above Screens are made of very stout material, finished with best quality Silver Paint, giving a slight stippled effect, thus increasing the illumination. Each screen is mounted on split roller and batten, with black border. Cords and Pulleys or Stretchers can be supplied if required, at extra cost as below.

### Prices :

	On Roller and Batten	Cords and Pulleys	Side Stretchers (per pair)
	£ s. d.	£ s. d.	
5-ft. x 5-ft.* ...	1 17 6	13 6	4/6
6-ft. x 6-ft.* ...	2 17 0	19 6	5/-
3-ft. x 2-ft. ...	1 1 0	9 6	3/-
4-ft. x 3-ft. ...	1 4 6	11 6	3/6
5-ft. x 4-ft. ...	1 11 6	11 6	3/9
6-ft. x 4½-ft. ...	1 18 6	19 6	4/-
7-ft. x 5-ft.* ...	2 17 6	1 0 0	4/6
8-ft. x 6-ft.* ...	3 13 6	1 1 0	5/-

*Delivery from stock, except those marked \* which can be supplied in 7 days.*

*Other sizes made to order.*

## SILVER SCREEN PAINT (I)

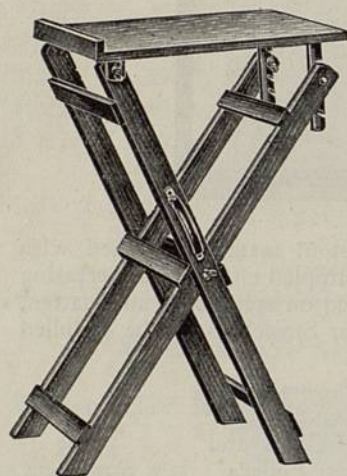
¼ Gall. ...	18/6	½ Gall. ...	25/-	1 Gall. ...	45/-
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## OAK LANTERN STAND (C)

No. 98

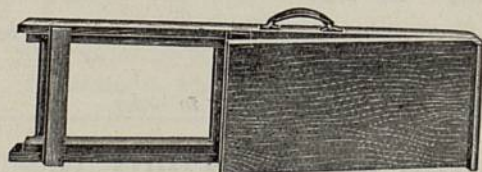
Folding Pattern.



Ready for use.

A feature of this stand is that it will fold up, as illustrated below, for transport, for which purpose it is fitted with a strong leather carrying handle. Height of stand with table level 36 inches.

Price £2 10 0



Folded for transport.

## LANTERN STAND (C)

No. 99



Fitted with solid oak top 24" x 12" x 1" thick fitted on telescopic steel tube legs which are easily removed for transit purposes. Can be raised or lowered as desired.

Height, Min. 24"

Height, Max. 45"

Weight 19 lbs.

Price

£2 2 0

## LANTERN STAND (C)

No. 100

A light pattern stand with legs of solid oak, fitted with adjustable table also shelf underneath. Can be folded up and strapped together for transport.

Table Top ... 20" x 12"

Middle Table ... 24" x 12"

Height to Top Table 3' 8"

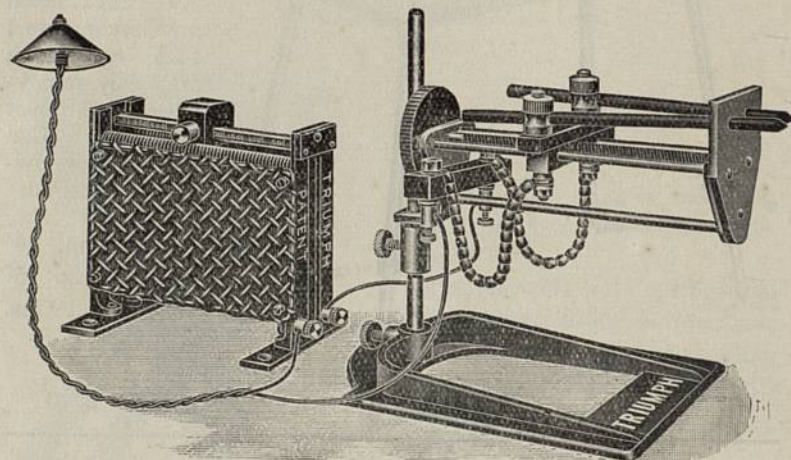
Price £1 17 6





## PARALLEL ARC LAMP OUTFITS (C)

No. 101



This Outfit is suitable for the same purposes as the Outfit on Page 31 but the arc lamp is of the parallel type instead of scissors pattern, and can be used off any house lighting supply by means of the adjustable resistance.

### Prices :

Outfit Complete with Arc Lamp, Resistance for all voltages up to 250 volts, 3 yards Flex, 2 Pin and B.C. Adaptor and 25 Carbons.

#### On Plain Tray

(A) £3 10 0

#### On Mechanical Tray

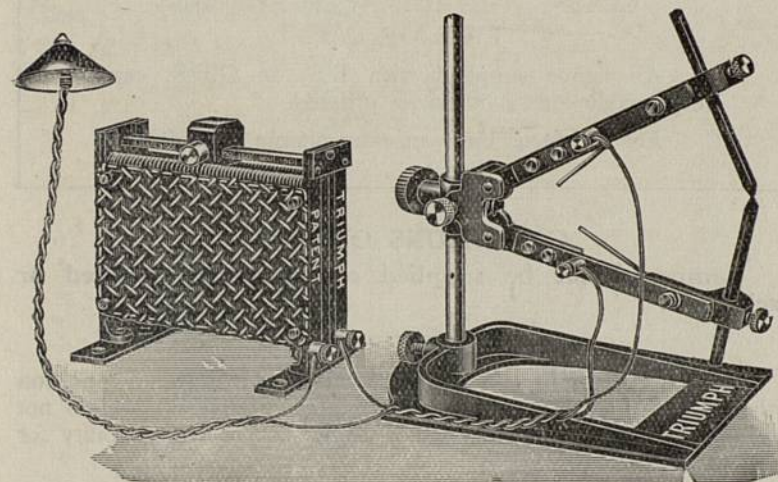
(B) £4 15 0

Arc Lamp only on Plain Tray	...	...	...	...	£1 5 0
" " " on Mechanical Tray	...	...	...	...	£2 10 0

*When ordering please state whether A.C. or D.C.*

## SCISSORS ARC LAMP OUTFIT (C)

No. 102



These Outfits are suitable for Optical Lanterns, Small Cinematograph Machines, Enlarging Lanterns. They are supplied with adjustable resistances which enables the Arc Lamp to be used off any house lighting circuit.

### Prices :

Outfit Complete with Arc Lamp, Resistance for all voltages up to 250 volts, 3 yards Flex, 2 Pin and B.C. Adaptor and 25 Carbons.

#### On Plain Tray

£3 5 0

#### On Mechanical Tray

£4 10 0

Arc Lamp only on Plain Tray	...	...	...	...	£1 2 6
" " " on Mechanical Tray	...	...	...	...	£2 7 6

*When ordering please state whether A.C. or D.C.*



## PROJECTOR TYPE LAMPS

When ordering please state full particulars of Lamp required, namely :

CLASS, VOLTAGE, WATTAGE and  
TYPE OF CAP.

All lamps supplied with E.S. or G.E.S. caps respectively unless otherwise ordered.

For Pre-focus Caps an extra charge is made.

### CONDITIONS OF SALE

Lamps cannot be supplied on approval, credited or exchanged.

### GUARANTEES.

We test every lamp and guarantee to deliver it in sound condition either at our premises or at our customers' premises. We do not guarantee the life of any lamp, nor do we accept responsibility for breakage in use.

### DAMAGE IN TRANSIT.

Lamps damaged in transit will only be replaced on the following conditions :—

Customers must immediately on arrival of the lamp examine it carefully, and make certain that the bulb is not broken, the filaments intact, and the lamp is the correct voltage and wattage.

If any fault exists the lamp must be returned immediately by our messenger, or parcel post, carriage paid. If any lamp is used, or delay occurs in returning the lamp, we shall decline to replace it.

If a lamp appears faulty, we are prepared to return it to the manufacturers for report, and their decision will be accepted as final.

If they decide to credit or replace, we shall be quite pleased to pass same on to our customer.

### NOTICE.

To help our customers in selecting the correct size Focuslite lamp, under favourable conditions, it is advisable to allow at least **5 watts per square foot** of screen surface for standard size slide Projection and **7 watts per square foot** of screen surface for standard size cinematograph Projection. Extra wattage must be allowed for densely coloured slides or tinted films, also extra long throws.

## PROJECTOR TYPE LAMPS

Class	Volts	Watts	Cap	Price
A1	30	100	E.S.	12 0
"	32	165	E.S. or Pre-focus	22 6
"	30	250	E.S.	22 6
"	30	600	G.E.S.	38 0
"	30	900	G.E.S.	35 0
"	50	200	E.S. or Pre-focus	21 0
"	50	250	E.S. or Pre-focus	22 6
"	50	500	E.S. or G.E.S.	26 0
"	60	100	E.S.	12 6
"	60	150	E.S.	17 6
"	100/250	100	E.S. or Pre-focus	10 9
"	100/110	250	E.S. or Pre-focus	20 0
"	200/250	250	E.S. or Pre-focus	21 0
"	100/250	500	E.S. or Pre-focus	25 0
"	100/250	1000	G.E.S.	32 0
A3	100/250	100	E.S.	10 9
"	100/110	250	E.S.	20 0
"	200/250	250	E.S.	21 0
"	100/250	500	G.E.S.	28 6
B	100/250	100	E.S.	9 0
"	100/250	250	E.S.	19 0
"	100/250	500	E.S. or G.E.S.	25 0
"	100/250	1000	G.E.S.	32 0
F	6	24	E.S. or S.E.S.	4 3
"	12	24	S.E.S.	3 9
"	12	48	E.S. or S.E.S.	3 9
"	12	100	E.S.	10 9
"	12	300	E.S.	32 6



# SPARE PARTS FOR "TRIUMPH" FOCUSLITE OUTFITS (C)



No. 1  
B.C. Bakelite  
Adaptor  
6d.



No. 2  
B.C. Bakelite  
Lampholder  
9d.



No. 3  
E.S. Holder for No.  
7 Outfit (old type)  
1/-



No. 4  
Lampholder for  
No. 11 Lamp Arm  
3/6



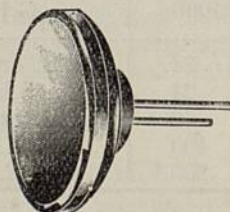
No. 5  
G.E.S. to E.S.  
3/6



No. 6  
G.E.S. Holder for  
No. 17 Lamp Arm  
5/-



No. 7  
Mirror Clip  
for No. 108 Outfit  
2/3



No. 8  
4" Mirror in Mount  
8/6

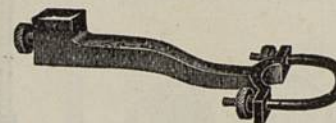


No. 9  
4" Mangin Mirror  
for use with  
No. 7 Mirror Clip  
5/6

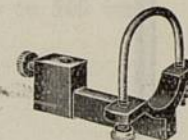
# SPARE PARTS FOR "TRIUMPH" FOCUSLITE OUTFITS (C)



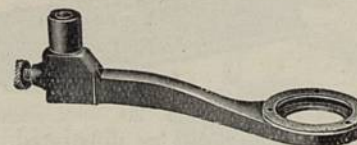
No. 10  
Clamp for No. 8  
1/6



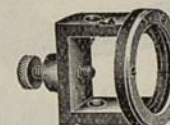
No. 11  
Lamp Arm and Screws  
For No. 4 Holder  
3/-



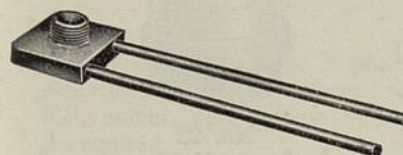
No. 12  
'O' Lamp Arm  
for No. 4 Holder  
3/-



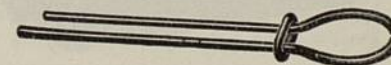
No. 13  
Lamp Arm and Screws  
For No. 22 Lampholder  
3/-



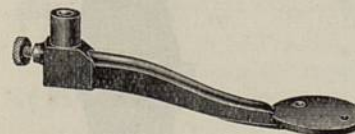
No. 14  
Lamp Arm for  
No. 22 Lamp Holder  
3/-



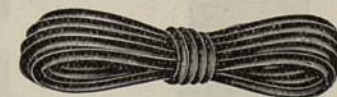
No. 15  
Lamp Arm  
For No. 23 Holder  
1/3



No. 16  
Lamp Arm  
For No. 3 Holder  
9d.



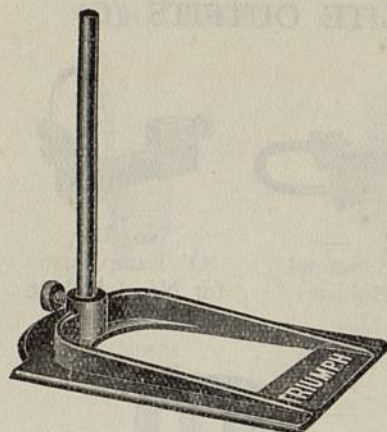
No. 17  
Lamp Arm  
For No. 6 Holder, G.E.S.  
3/6



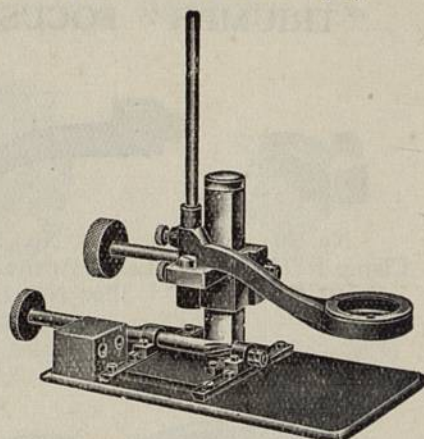
No. 18 Flex  
2½/5 amps Maroon or 6d. yard  
Blue-Black  
10 „ Red-black 1/- „  
20 „ Red-black 2/- „



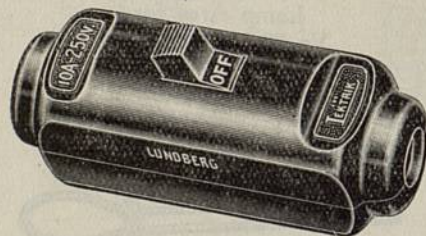
## SPARE PARTS FOR "TRIUMPH" FOCUSLITE OUTFITS (C)



No. 19  
Aluminium Tray and Post  
3/6



No. 20  
Mechanical Tray, as illustrated, 32/-  
Without Lamp Arm, 28/6



No. 21  
Double Pole 10 amp Switch  
5/-



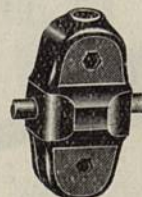
No. 22  
Lamp Holder  
For No. 13 Lamp Arm  
3/-



No. 23  
Bakelite E.S. Holder  
for No. 15  
Lamp Arm, 1/9



No. 24  
2 Pin B.C. Adaptor  
1/-



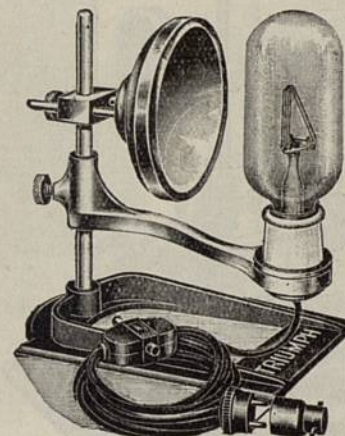
No. 25  
5 amp Switch  
1/6

## "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 103

For use with Class A1 Projector Lamps up to 500 watts.

For  
Price  
of  
Lamps  
see  
Page 33



Outfit on Plain Tray

For  
Use  
Direct  
from the  
Current  
Supply

This Outfit has been improved, the tray finished in blue enamel, other parts chromium plated, fitted with 2-pin B.C. plug, porcelain E.S. holder, new pattern flex, and bakelite 5 amp. (No. 25) switch if required.

### Prices :

(A) Outfit on Plain Tray, With Switch...	...	...	£1 3 0
(B) " " " " Without Switch	...	...	£1 1 6

These Outfits can be supplied on Mechanical Trays if required at 25/- extra on above prices.

When ordering, please state voltage and wattage of lamps required.

(Lamps extra).

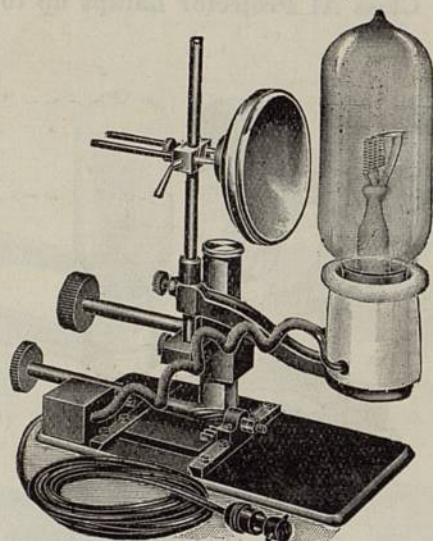


## “TRIUMPH” FOCUSLITE OUTFITS (C)

Series No. 104

For use with 200/250 volt 1000 watt Projector Lamps A1.

For  
Price  
of  
Lamps  
see  
Page 33



Outfit on Mechanical Tray

This Outfit is similar to the No. 103A except that it is fitted with a G.E.S. holder, for 1000 watt lamp, 2-pin B.C. plug, new pattern flex, and switch No. 25 if required.

### Prices :

(C)	Outfit on Plain Tray, With Switch...	...	...	£1	7	0
(D)	“ “ “ “ Without Switch	...	...	£1	5	6

For use with 110 volt 1000 watt lamps.

This Outfit *cannot* be used from a lighting circuit (therefore no adaptor is supplied), but 10 amp. flex is fitted, also 10 amp. (No. 21) D.P. switch if required.

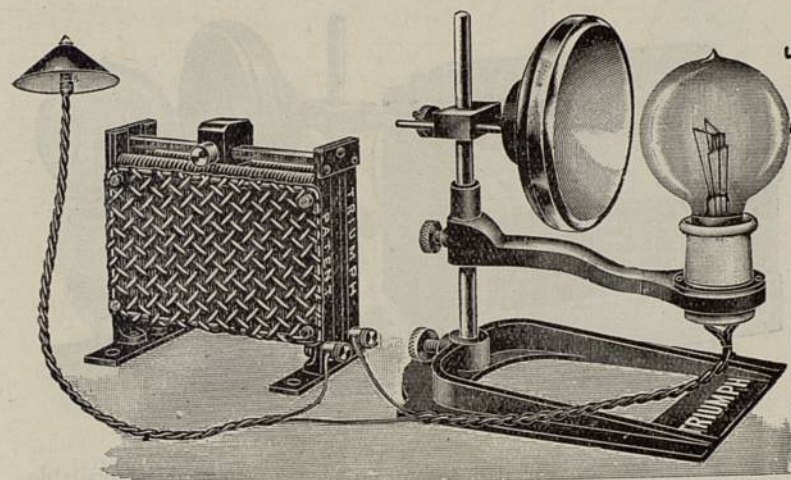
(E)	Outfit on Plain Tray, With Switch...	...	...	£1	12	6
(F)	“ “ “ “ Without Switch	...	...	£1	7	6

Outfits on Mechanical Trays 25/- extra.

(Lamps extra).

## “TRIUMPH” FOCUSLITE OUTFITS (C)

Series No. 105.



These Outfits are similar in construction to those illustrated on pages 37 and 38, but with the addition of an adjustable resistance for using a specified voltage lamp on any electric supply up to 250 volts. A most convenient outfit for travelling purposes.

### Prices :

For use with		Outfit on Plain Tray	
		Without Switch	With Switch
(A)	12 volt 24 watt Lamp	£2 17 6	£2 19 0
(B)	12 “ 48 “ “	£3 2 6	£3 4 0
(C)	32 “ 165 “ “	£3 5 0	£3 6 6
(D)	30 “ 250 “ “	£5 5 0	* £5 10 0
(E)	30 “ 600 “ “	£9 5 0	* £9 10 0
(F)	30 “ 900 “ “	£11 5 0	* £11 9 6
(G)	50 “ 250 “ “	£3 0 0	£3 1 6
(H)	100 “ 250 “ “	£2 18 6	£3 0 0
(I)	100 “ 500 “ “	£3 5 0	£3 6 6
(J)	100 “ 1000 “ “	£5 5 0	* £5 10 0

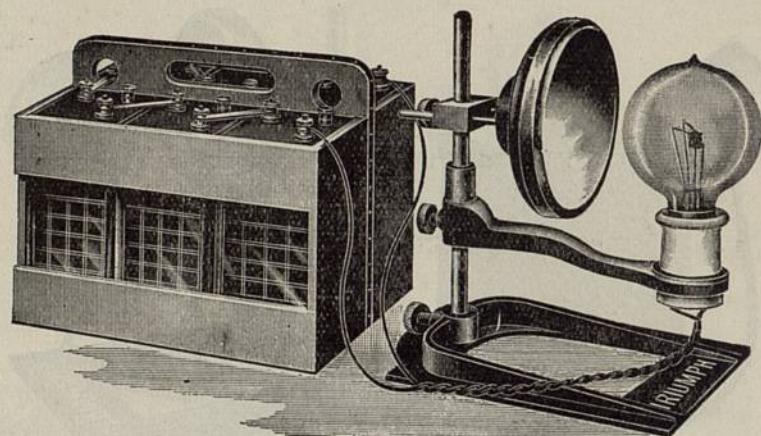
Outfits marked \* cannot be used off Lighting Circuits. For Mechanical Tray Outfits add 25/- to above prices.

For prices of Lamps see page 33.



## "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 106.



These Outfits are for use where no electric current is available, and are supplied in strong teak cases. When fully charged are suitable for 4 to 5 hours run.

Each outfit is fitted with 5 amp (No. 25) or 10 amp (No. 21) switch respectively.

### Prices :

For use with					Outfit on Plain Tray
(A)	6 volt	24 watt	Lamp ...	...	£1 2 6
(B)	12 "	48 "	" "	...	£1 2 6
(C)	12 "	100 "	" "	...	£1 8 0

For Mechanical Tray Outfits add 25/- to above prices.

## ACCUMULATORS (I)

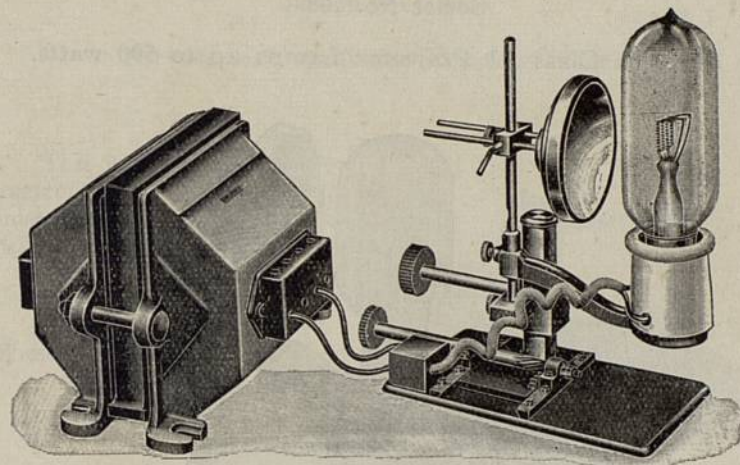
For use with above lamps.

					With Case	Without Case
(A)	6 volt	24 watt	...	...	£1 17 6	£1 12 6
(B)	12 "	48 "	" "	...	£3 15 0	£2 19 6
(C)	12 "	100 "	" "	...	£7 10 0	£6 10 0

For prices of Lamps see page 33.

## "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 107.



Great economy is effected by employing low Voltage, high Amperage Lamps with concentrated filaments, and a special Transformer to reduce the Voltage to that required by the Lamps, and this is accomplished without any appreciable loss of current.

One of the special features is that every set, except those marked with a star, can be employed off ordinary Lampholders. Another advantage is that those persons possessing one of the high power Outfits can always employ any of the lower power lamps with the Outfit. For example, with a 6C Outfit No. 6B Lamps can be used. A 10 amp. Double Pole Switch can be fitted if required (No. 21).

For full specifications of Transformers see pages 44 and 45.

Wherever Alternating Current is available, we strongly advise the use of these Sets, and particularly draw attention to the very high candle-power obtainable from the low current consumption, as shown by the scale below.

No.	For use with Lamp.		Approximate Current Consumption on		PRICES	
	volts.	watts.	100-110 volts.	200-250 volts.	without switch.	with switch.
B.	30	250	3 amps.	1½ amps.	£4 7 6	£4 12 6
C.	30	600	*6 amps.	3 amps.	£5 10 6	£5 15 6
D.	30	900	*9 amps.	4½ amps.	£7 7 6	£7 12 6

Outfits on Mechanical Tray 25/- extra.

Prices are for 50/100 cycles. 25 cycles 20% extra. 40 cycles 15% extra.

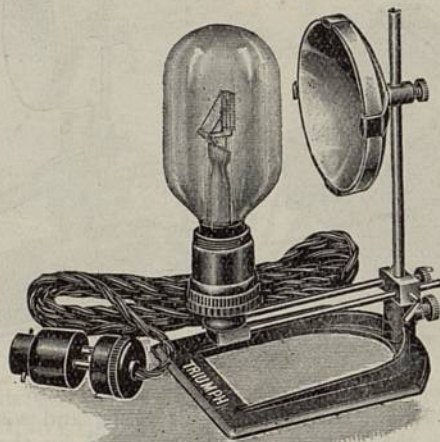
**Important.**—It is absolutely necessary when ordering to state the exact Voltage and Periodicity (if under 50) of the Current on which the Outfit is to be employed. 12ft. of Flex is supplied to connect Mains to Transformer, and 6ft. of Cable to connect Transformer to Outfit. Other sizes of Transformers can be supplied on receipt of data.



## “TRIUMPH” FOCUSLITE OUTFITS (C)

Series No. 108.

For use with Class A1 Projector Lamps up to 500 watts.



Outfit on Plain Tray

This Outfit is similar to the No. 1 Series, but is fitted with a Bakelite E.S. Holder, 2-pin B.C. Plug, New Type Flex, and 5 amp. Bakelite Switch No. 25 if required.

For use direct from the current supply.

### Prices :

A.	Outfit on Plain Tray	With Switch	...	...	...	18	0
B.	„ „ „ „	Without Switch	...	...	...	16	6

(Lamps extra).

For price of Lamps see page 33.

## “TRIUMPH” FOCUSLITE OUTFITS (C)

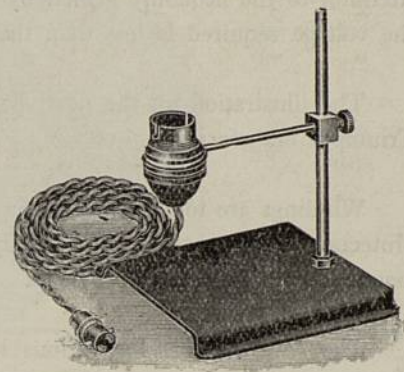
Series No. 109.

For use with Ordinary Lighting Lamps.

This is a cheap outfit for amateur use. Cast iron Tray finished in brown, bakelite B.C. Holder, Flex, and B.C. Adaptor.

Price Complete 6/6

These Outfits are only supplied complete.



## “TRIUMPH” FOCUSLITE OUTFITS (C)

Series No. 110.

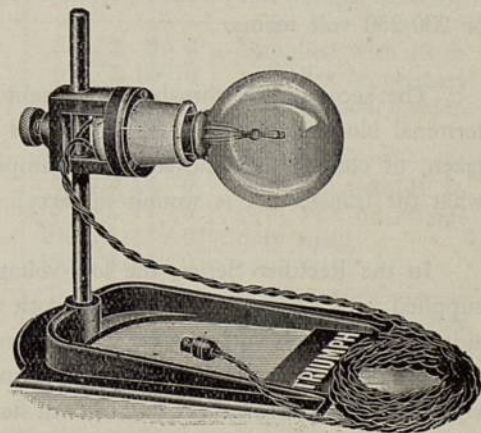
For use with Class A3 Projector Lamps 100 and 250 watts.

The lamps burn in the position illustrated. The Outfits will be found very useful for home Cinematograph Machines, Optical Lanterns, Enlargers and numerous other purposes. They can be used off any lighting circuit without a Resistance, on alternating or direct current.

### Price :

Outfit on Plain Tray, 11/6

For Price of Lamps, see page 33.





## "TRIUMPH" TRANSFORMERS (C)

Alternating current becoming more universal, we draw your attention to the economy gained by means of a Transformer when the voltage required is less than the mains voltage.

The illustration on the next page shows the improved type of Triumph Transformer.

Windings are totally enclosed in a metal case, and the terminals protected to prevent one accidentally touching a live wire. Also a metal carrying handle is provided.

They are suitable for various kinds of work and should take the place of resistances as a more economical method of obtaining reduced voltages.

In the No. 6 Series, the high voltages sizes (200/250), the primary side is brought out to three shrouded connecting pins, and connected to the mains by means of a detachable two socket plug; by connecting on to either pair of pins, the Transformer can be used on either 200/220 or 230/250 volt mains.

The secondary terminals are brought out to a 4-way projected terminal block giving 3, 5, 8, 22, 25 and 30 volts. (Care must be taken, of course, that the secondary amperage is not greater than what the transformer is wound to carry).

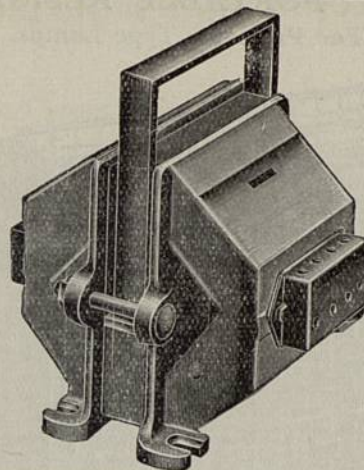
In the Rectifier Series, the low voltage sizes 100/110 volts, are supplied with 12 feet of twin flex on both the primary and secondary sides. In the high voltage sizes (200/250 volts) the primary terminals are brought out to a suitably protected terminal block marked 200/220 volts and 230/250 volts. 12 feet of twin flex is supplied on secondary side only.

## "TRIUMPH" TRANSFORMERS (C)

No. 112.

All  
Transformers  
are  
Auto-wound.

Suitable for  
50-100 cycles.  
Single Phase.



25 Cycles  
20% extra.

40 Cycles  
15% extra.

	Primary Voltage	Secondary Volts	Amps	PRICE	REMARKS
No. 107 Series	100/110	22, 25, 30	10	£3 0 0	Primary Side, 12ft. twin flex supplied.
	100/110	22, 25, 30	20	£3 17 6	
	100/110	22, 25, 30	30	£5 17 6	
	200/220 and 230/250	22, 25, 30	10	£3 5 0	Primary side, price includes socket plug for voltage selector.
		22, 25, 30	20	£4 5 0	
		22, 25, 30	30	£6 0 0	
Rectifier Series.	100/110	25	5	£2 8 0	Supplied with 12 ft. twin flex on primary and secondary sides.
	100/110	50	5	£2 10 0	
	100/110	50	10	£3 7 0	
	100/110	50	15	£3 13 0	
	200/220 and 230/250	25	5	£2 12 0	Supplied with 12 ft. twin flex on secondary side.
		50	5	£2 17 6	
		50	10	£3 17 0	
		50	15	£4 8 0	
	Any named voltage up to 250	70-75	30	£7 0 0	Suitable for Arc Lamps with a resistance in circuit, and are D.W. open type.
		70-75	40	£8 10 0	

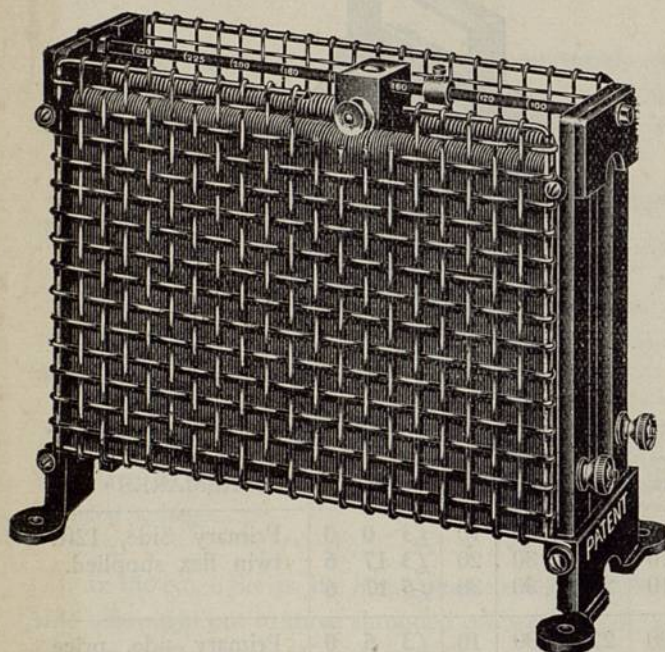
We shall be pleased to quote for any transformer not listed. Particulars required—Mains or Primary Voltage, Cycles, Phase, Secondary Voltage and Maximum Amps., Auto or Double Wound.



## "TRIUMPH" PORTABLE RESISTANCES (C)

For Projector Type Lamps.

No. 111.



These Resistances are our own special patent and manufacture, composed of an Iron Frame, asbestos covered, wound with best quality Resistance Wire, fitted with Brass Bar across the top, on which runs our Patent Roller Contact & Rocker Bearings. A Wire Guard is fitted to each side of Resistance.

For use on all voltages up to 250.

### B.2.

For use with  
12 volt 24 watt  
110 „ 250 „

Price  
£1 15 0

### B.4.

For use with  
12 volt 48 watt  
32 „ 100 „

50 „ 200 „  
50 „ 250 „  
52 „ 260 „  
100 „ 300 „

Price  
£1 17 6

### C.5.

For use with  
12 volt 72 watt  
32 „ 165 „  
110 „ 500 „

Price  
£2 2 0

### C.10.

For use with  
30 volt 250 watt  
110 „ 750 „  
110 „ 1000 „

Price  
£3 19 6

### C.20.

For use with  
30 volt 600 watt

Price  
£7 19 6

### C.30.

For use with  
30 volt 900 watt

Price  
£9 17 6

When ordering please state Lamp to be used.

## HIRE TERMS FOR APPARATUS

	Per night	Per week
Optical Lantern Complete (without illuminant) ...	12/6	50/-
Optical Lantern Complete with Focuslite Outfit (no lamp) ... ..	15/-	57/6
Optical Lantern Complete with Focuslite Outfit (no lamp), 8-ft. Calico Screen and Stand ...	21/-	75/-
Stage Box Complete with Arc Lamp and Carbons	10/6	35/-
Spotlight Complete on Stand (no lamp) ... ..	15/-	57/6

A deposit is required in all cases, except regular customers who have a ledger account.

We cannot, under any circumstances, let out on hire Projector Type Electric Lamps for any of the above articles.

Should any of the above articles be returned in damaged condition, cost of repairing will be charged to customer.

## CINEMATOGRAPH & LANTERN EXHIBITIONS

	Per show
Optical Lantern, Focuslite Outfit, 8-ft. Screen and Operator ... ..	42/-
Portable Cinematograph, Screen and Operator ...	63/-

The above named prices do not include the necessary carriage and travelling expenses (Taxi and Railway Fares) incurred in conveying the apparatus to and from the place of exhibition, which are extra.

Additional charges are made when Operator is compelled to stay overnight.

Ample notice should be given, so that apparatus is available.

When an operator is required, at least 7 clear days' notice should be given.

The following information is always required.

Voltage of electric supply.

Maximum amperage available.

Size of Screen.

Distance from Screen to the position the apparatus will be placed.



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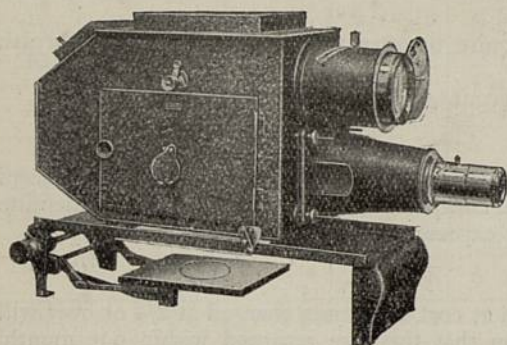
# Section

## No.

## 34

EPIDIASCOPIES

OPTICAL LANTERNS



LANTERN and SCREEN STANDS

OPAQUE SCREENS - SILVER SCREENS

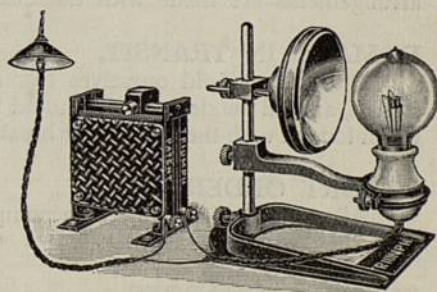
TRAVELLING CASES

FOCUSLITE

OUTFITS

PROJECTOR

LAMPS



RESISTANCES - TRANSFORMERS

and All Accessories

W.D.

8°

230

BR





## TERMS OF BUSINESS.

All prices in our list are subject to revision without notice, but we will endeavour to maintain these prices for season 1934-35.

We reserve the right to depart from the specifications and illustrations without notice.

### ACCOUNTS.

Customers who require to open credit accounts should furnish two trade references.

2½% settlement discount, 28 days, otherwise strictly nett.

### CARRIAGE.

All carriage charges are payable by the customer, and we always despatch goods by the cheapest route, unless we receive definite instructions to send by express post or passenger train.

### PACKING.

All packing charged at cost, and cases charged at 2/- or over will be credited on condition that they are returned within one month, carriage paid.

### RETURNS.

Any goods supplied to a definite order cannot under any circumstances be accepted back for credit.

### APPROVAL.

We regret we cannot supply any goods on approval, unless special arrangements are made with the directors in writing.

### DAMAGE IN TRANSIT.

We do not hold ourselves responsible for damage to goods in transit, and all goods received should be immediately examined, and a claim lodged with the Carrier for breakage, within 24 hours of delivery.

### EXPORT ORDERS.

All export orders must be accompanied by full remittance, otherwise they will be sent C.O.D.

### SHIPPING CHARGES.

All Shipping Charges, Customs Duties, Insurances, etc., extra.

ORDERS ARE ONLY EXECUTED ON ABOVE CONDITIONS.

## REFERENCE TABLES

showing at a glance the Focus of Lens required to give a certain size picture at a given distance from the screen.

### TABLE FOR LANTERN LENSES.

Screen Distance in feet	FOCUS OF LENS IN INCHES							
	6	8	10	12	14	16	18	20
10	5. 0	3. 9	2.11	2. 6	1.10	1. 8	1. 8	1. 6
12	6. 0	4. 6	3. 6	3. 0	2. 6	2. 3	2. 0	1. 9
15	7. 6	5. 8	4. 4	3. 9	3. 1	2. 9	2. 6	2. 3
20	10. 0	7. 6	5.10	5. 0	4.12	3. 9	3. 4	3. 0
25	12. 6	9. 4	7. 4	6. 3	5. 2	4. 8	4. 2	3. 9
30	15. 0	11. 3	8. 9	7. 6	6. 3	5. 7	5. 0	4. 6
35	17. 6	13. 1	10. 3	8. 9	7. 3	6. 7	5.10	5. 3
40	20. 0	15. 0	11. 8	10. 0	8. 3	7. 6	6. 8	6. 0
45	22. 6	16.10	13. 2	11. 3	9. 4	8. 5	7. 6	6. 9
50	25. 0	18. 9	14. 8	12. 6	10. 4	9. 4	8. 4	7. 6
60	30. 0	22. 6	15. 0	14. 8	11. 3	10. 0	10. 0	9. 0

SIZE  
OF  
PICTURE.

### TABLE FOR CINEMATOGRAPH LENSES.

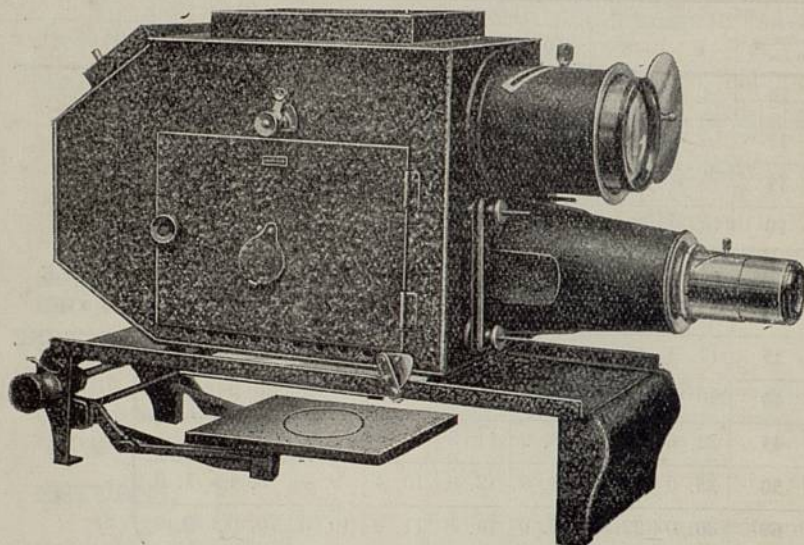
Screen Distance in feet	FOCUS OF LENS IN INCHES							
	2	2½	3	3½	4	4½	4¾	5
10	4. 8	3. 9	3. 2	2. 8	2. 4	2. 1	2. 0	1.11
15	7. 0	5. 8	4. 8	4. 0	3. 6	3. 2	3. 0	2.10
20	9. 5	7. 6	6. 3	5. 4	4. 8	4. 2	4. 0	3. 9
25	11. 9	9. 5	7.10	6. 8	5.10	5. 3	4.11	4. 8
30	14. 0	11. 3	9. 5	8. 0	7. 0	6. 3	5.11	5. 8
35	16. 5	13. 2	10.11	9. 5	8. 2	7. 4	6.11	6. 7
40	18. 9	15. 0	12. 6	10. 9	9. 5	8. 4	7.11	7. 6
45	21. 1	16.11	14. 0	12. 1	10. 7	9. 5	8.11	8. 5
50	23. 5	18. 9	15. 8	13. 5	11. 9	10. 5	9.10	9. 5
60	28. 2	22. 6	18. 9	16. 0	14. 0	12. 6	11.10	11. 3

SIZE  
OF  
PICTURE



## EPIDIASCOPE (N)

No. 26



Prices :

### EPIDIASCOPE

Complete with "Beck" Anastigmat Lens ( $4\frac{5}{8}$ " ) and Side Lamp-house.

£39 17 6

(Lamps extra).

Carrying Case if required ... .. £1 17 6

Resistance for using 110 volt 500 watt Lamps on  
200/250 volts ... .. £2 5 0

Class A1 Projector Lamps 500 watt should be used with this Outfit.

For prices see page 33.

## SPECIFICATION OF EPIDIASCOPE No. 25

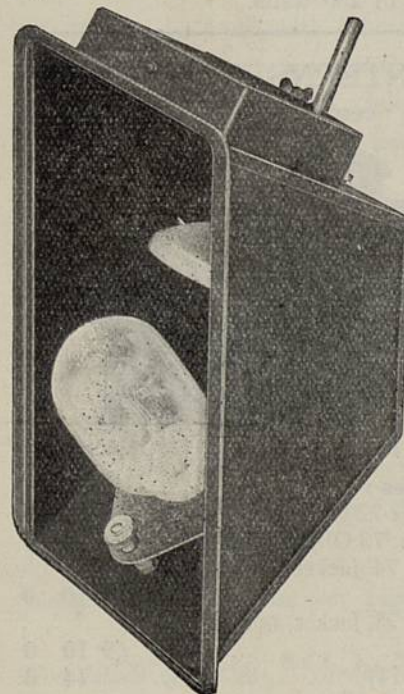
The Lamp-house is of sheet steel, crystalline enamelled, fitted with helical jacket to take "Beck" Anastigmat lens. The lantern slide lens is our Standard No. 4 series approximately 8-in. focus.

The Object Mirror is silver surfaced and can be adjusted to any position. The Optical Mirror Reflector which is behind the lamp is specially designed for this work, and when correctly adjusted, increases the light considerably on the screen.

When projecting opaque objects, the bottom glass is removed. This allows the article that is being projected to stand on a revolving turntable so that it can be viewed from any angle. **This attachment is not fitted in any other make of Epidiascope.**

The Lifting Table is raised and lowered by an eccentric spindle at the back of the body, and is fitted with a ratchet, so that the table can be locked in any position and cannot slip down.

A large door is provided at the side and a smaller one at the back of the body, so that the lamp and reflector can be easily fitted or adjusted. The Reflector is mounted in a ball and socket joint ensuring every adjustment.



The aperture for photographs or books is 6-in. square. There is also an auxiliary mirror fitted inside the body which acts as a cut-off to the lantern slide attachment.

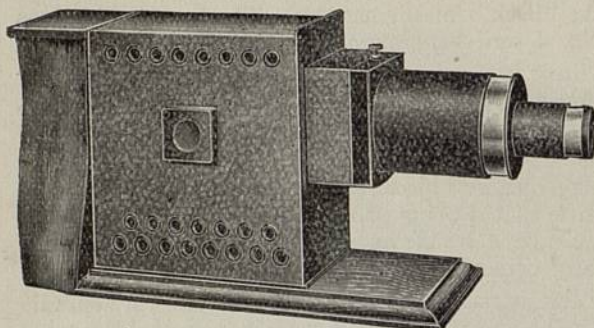
When showing slides, this mirror is lowered. The flap covering the top lens is lowered when not in use. Only one 500 watt lamp is necessary and good results are obtained at a throw of 20-35 feet, with a picture 10 feet square.

When greater illumination is required, the side lamp-house shown here, supplied with the outfit, can be brought into operation by installing another 500 watt lamp, and we strongly recommend the use of the extra lamp, especially where total darkness cannot be obtained.



## OPTICAL LANTERNS (C)

No. 27 (6" centre).



Price

£2 19 6

No. 27 Lantern with No. 80 Cylinder.

Fitted with Sliding Tube, No. 80 Lens Cylinder with 6" or 8" focus lenses, 2-4" Plano Lenses, Black Curtain. Lantern finished brown crystalline enamel, the whole mounted on oak base board.

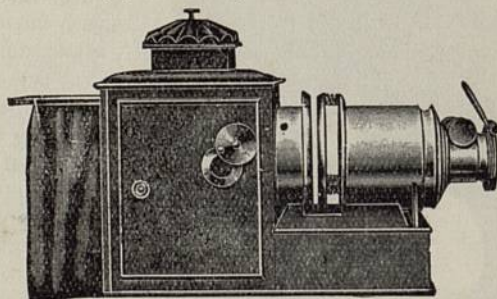
Will take Focuslite Outfits up to 250 watts.

## OPTICAL LANTERNS (C)

No. 28. ( $6\frac{1}{2}$ " centre).

These Lanterns are the old No. 15E and 15F pattern, and can only be supplied until the present stock is exhausted. Complete as specified below.

Suitable for Focuslite  
Outfits up to 500 watts.



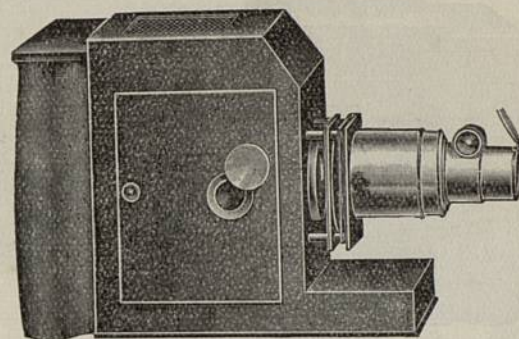
No. 28 Lantern with No. 72 Objective.

Prices :

A. With Single Draw Tube and No. 72 Objective 6" focus	£6	5	0
B. " " " " " " No. 73 Objective 7" focus	£7	2	6
C. With Three Draw Tube, No. 74 Jacket and No. 82 Cylinder ... ..	£8	10	0
D. With Three Draw Tube, No. 75 Jacket and No. 83 Cylinder ... ..	£9	10	0
No. 28 Travelling Case (see page 14) ... ..		14	0

# OPTICAL LANTERNS (C)

No. 29. (8" centre).



Very large body with interior dimensions 25" high, 12" long and 7½" wide, strongly made with Ventilated Top, large Side Door, with Eye-piece and Shutter. All Brass Ventilated Stage with Single Draw Tube (No. 2 thread), Large Black Curtain, 4½" Bi-convex and Meniscus Lenses.

Lantern body finished black crystalline enamel. Will take Focuslite Outfits up to 1000 watts and Arc Lamps Nos. 113, 114, 115.

Prices :

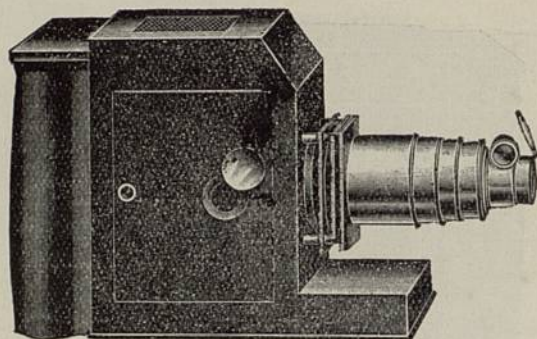
A.	With No. 72 Objective 6" focus	...	...	...	£9 17 6
B.	„ No. 73 „ 7" „	...	...	...	£10 15 0
C.	„ No. 76 Jacket and Cylinder 6" focus...	...	...	...	£9 9 0
D.	„ No. 77 „ „ „ 7" „	...	...	...	£10 5 0
No. 29 Travelling Case (see page 14)					19 0

*For details of Jackets, Cylinders and Objectives see page 16 and 17.*



## OPTICAL LANTERNS (C)

No. 30. (8" centre).



The construction of this lantern is identical to No. 29 except that it is fitted with Telescopic Three Draw Tubes instead of Single Draw Tube, to enable longer focus lenses to be used than on the No. 29.

If Lenses are over 14" focus, Extension Tubes must be used, prices on page 18.

Will take Focuslite Outfits up to 1000 watts and Arc Lamps Nos. 113, 114, 115.

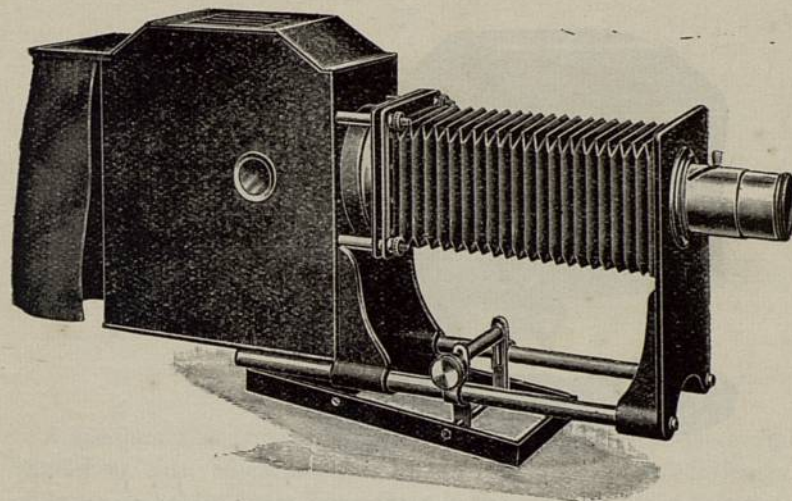
### Prices :

A.	With No. 74 Jacket and No. 82 Cylinder 6" to 18"	£12 5 0
B.	" No. 75 " " No. 83 " 7" to 18"	£13 5 0
C.	" No. 76 " " Cylinder 6" to 18"	... £11 5 0
D.	" No. 77 " " " 7" to 18"	... £11 17 6
No. 30 Travelling Case (see page 14) ... ..		19 0

*For details of Jackets and Cylinders see pages 16 and 17.*

## OPTICAL LANTERNS (C)

No. 31. (6 $\frac{3}{4}$ " centre).



No. 31 Lantern with No. 79 Jacket and Cylinder.

The body of this Lantern has been re-designed and enlarged, fitted with best quality leather bellows, black curtain, 4 $\frac{1}{2}$  bi-convex and meniscus lenses, a new combined adjustable jacket and cylinder either crystalline and polished nickel (No. 76 and 77) or a heavy chromium plated type (Nos. 78 and 79) for lenses up to 18" focus.

The whole body black crystalline enamel with other parts plated.

Will take Focuslite Outfits up to 1000 watts. Smart Travelling cases can be supplied if required.

### Prices :

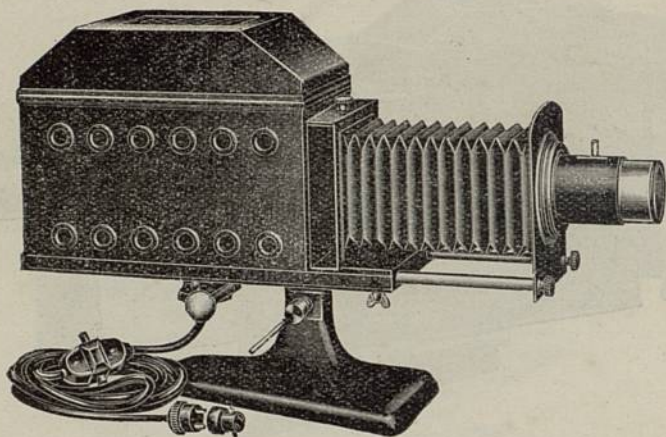
A.	With No. 76 Jacket and Cylinder, 6" to 18"	... £8 15 0
B.	" No. 77 " " " "	... £9 12 6
C.	" No. 78 " " " "	... £9 5 0
D.	" No. 79 " " " "	... £10 5 0
No. 31 Travelling Case (page 14) ... ..		19 0

*For details of Jacket and Cylinders see pages 16 and 17.*



## OPTICAL LANTERNS (C)

No. 36.



A very smart lantern with ventilated hinged top, mounted on strong, light base with tilting device, fitted with best quality leather bellows, and combined crystaline enamel jacket and plated cylinder (No. 76 or 77), with Focussing adjustment for lenses up to 12" focus. 2-4½ condenser lenses, slide carrier holder, E.S. lampholder fitted in adjustable jacket, 3 yards new pattern flex, 5 amp. switch, 2-pin B.C. adaptor, and 4" Mangin Mirror in Holder.

The whole lantern black crystaline enamel and plated.

Can be supplied with heavy all chromium plated best quality Jacket and cylinder No. 78 or 79 if required.

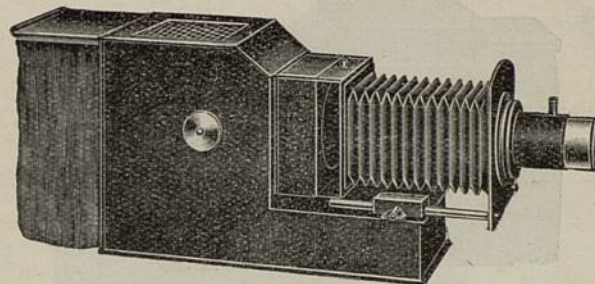
Will take projector lamps up to 250 watts. Smart travelling cases are available.

### Prices :

	Without Mirror	With Mirror
A. With No. 76 Jacket and Cylinder ...	£6 12 6	£6 19 6
B. " No. 77 " " " " ...	£7 8 6	£7 15 0
C. " No. 78 Chromium plated ...	£7 3 6	£7 10 0
D. " No. 79 " " " " ...	£7 18 6	£8 5 0
No. 36 Travelling Case (page 14) ...	14 0	14 0

## OPTICAL LANTERNS (C)

No. 37. (5½" centre).



A medium size lantern body with ventilated top, eye-piece and shutter at side, adjustable leather bellows, 2-4" condenser lenses, slide carrier holder, brass flange fitted in front shield to take objectives or jacket and cylinders specified below up to 10" focus, hinged flap at back with rod and fire-proof curtain.

Lantern finished in black crystaline enamel. Will take Focuslite Outfits up to 250 watts.

Smart cloth covered Travelling Case can be supplied if required.

### Prices :

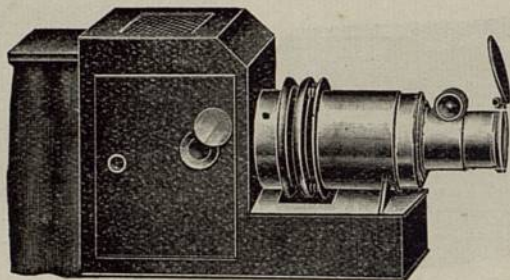
A. With No. 70 Objective... ..	£5 5 0
B. " No. 76 Jacket and Cylinder ... ..	£5 10 0
C. " No. 77 " " " " ... ..	£5 19 6
No. 37 Travelling Case (page 14)... ..	13 0

For details of Objectives, Jackets and Cylinders see pages 16 and 17.



## OPTICAL LANTERNS (C)

No. 38. ( $6\frac{1}{2}$ " centre).



New type body with ventilated top, large side door with eye-piece and shutter, stage and front table made of brass, polished and lacquered.

Sliding tube fitted with brass flange (No. 2 thread), hinged flap at back with rod and fireproof curtain, 4" bi-convex and meniscus lenses.

Lantern body finished black crystalline enamel. Will take Focuslite Outfits up to 500 watts.

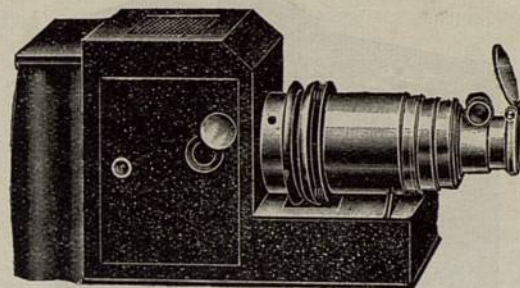
### Prices :

A. With No. 72 Objective, 6" focus	...	...	...	£6 10 0
B. „ No. 73 „ 7" „	...	...	...	£7 5 0
C. „ No. 76 Jacket and Cylinder, 8" focus	...	...	...	£6 0 0
D. „ No. 77 „ „ 8" „	...	...	...	£6 15 0
No. 38 Travelling Case (page 14)...	...	...	...	14 6

*For details of Objectives, Jackets and Cylinders see pages 16 and 17.*

## OPTICAL LANTERNS (C)

No. 39. ( $6\frac{1}{2}$ " centre).



New type body with ventilated top, similar in construction to Lantern No. 38 except that the single draw tube is replaced by a set of three draw telescopic tubes suitable for lenses up to 14" focus (No. 2 thread), hinged flap, rod and black curtain at back.

Lantern body black crystalline enamel. Will take Focuslite Outfits up to 500 watts.

If lenses over 14" focus are required, Extension Tubes must be added (prices on page 18).

### Prices :

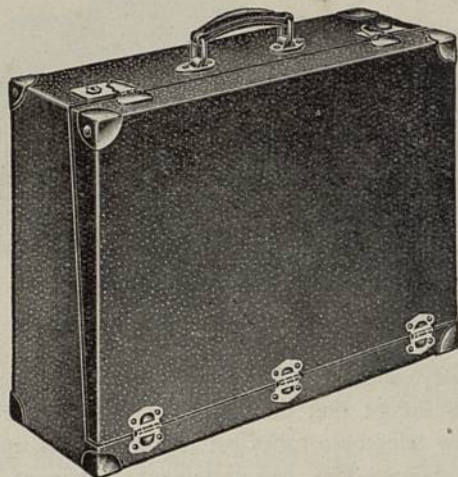
A. With No. 76 Jacket and Cylinder, 6" to 14" focus	£7 17 6
B. „ No. 77 „ „ 7" to 14" „	£8 10 0
C. „ No. 74 „ and No. 82 „ 6" to 14" „	£8 15 0
D. „ No. 75 „ and No. 83 „ 7" to 14" „	£9 12 6
No. 39 Travelling Case (page 14)...	14 6

*For details of Jackets and Cylinders see pages 16 and 17.*



## TRAVELLING CASES (C)

A New Departure in Lantern Cases.  
NO MORE HEAVY METAL CASES.



A smart selection of carrying cases in three sizes suitable for all purposes, but have been designed for lanterns listed in this catalogue.

Made of strong wood, covered outside with black pebble cloth, lined inside with green baize, plated metal corners, hinges and fasteners, strong black handle and two keys.

Suitable for Lanterns as numbered below.



### Prices :

No. 28 (page 6)	Size	19"×14"×6½"	...	...	...	14/-
No. 29 ( " 7)	"	20½"×16½"×8½"	...	...	...	19/-
No. 30 ( " 8)	"	20½"×16½"×8½"	...	...	...	19/-
No. 31 ( " 9)	"	20½"×16½"×8½"	...	...	...	19/-
No. 36 ( " 10)	"	19"×14"×6½"	...	...	...	14/-
No. 37 ( " 11)	"	19"×10¾"×6½"	...	...	...	13/-
No. 38 ( " 12)	"	19"×14"×6½"	...	...	...	14/-
No. 39 ( " 13)	"	19"×14"×6½"	...	...	...	14/-

IDEAL WEEK-END CASES.

## CONDENSER LENSES (C)

For use with Cinematograph Machines, Optical Lanterns, Lime Boxes, Stage Projectors, Spotlights, Spot Attachments.

	Dia.	Plano	Bi-Convex	Meniscus	
	2½"	4/6	6/-	7/6	
	4"	5/-	5/6	5/6	
	4¼"	6/-	7/-	7/-	
	4½"	6/-	7/6	7/6	
Biconvex & Meniscus.					Plano Convex

## PLANO CONVEX LENSES (C)



4" dia., 9" focus	...	5/6	6" dia., 8" focus	...	15/-
5" dia., 9" focus	...	7/6	6" dia., 10" focus	...	12/6
6" dia., 9" focus	...	14/6	6" dia., 12" focus	...	11/6

## CONDENSER MOUNTS (C)

2½" dia. ...	6/6	4¼" dia. ...	8/6	5" dia. ...	15/6
4" dia. ...	7/-	4½" dia. ...	8/6	6" dia. ...	18/6

## CURTAINS (C)

For Back of Lanterns:

Asbestos	22"×16"	...	5/9
Black	14"×14"	...	2/6
Fireproof	14"×11"	...	1/6

## TRAYS (C)

Black Enamelled Tin Tray

with Post

Price 1/9



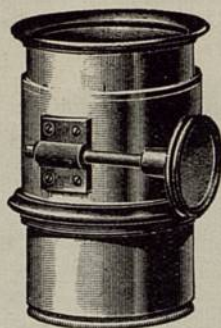
## OBJECTIVES FOR OPTICAL LANTERNS (C)

### No. 70 Objective.

Fitted with 2" dia.  
Lenses (No. 1 thread)

6" focus ... £1 7 6

Over 6" focus £1 10 0



No. 70 Objective.

### No. 71 Objective.

Similar to No. 70 but  
fitted with Sliding  
Shutter. (No. 1  
thread).

6" focus ... £1 11 6

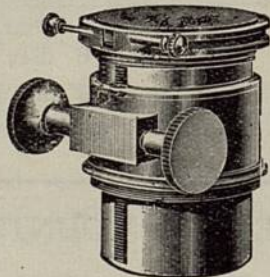
Over 6" focus £1 14 0

## OBJECTIVES FOR OPTICAL LANTERNS (C)

### No. 72 Objective.

Fitted with 2" dia.  
Lenses, Rack and  
Pinion Movement  
and Hinged Flap  
Shutter (No. 2  
thread).

6" to 18" focus  
£1 18 6



### No. 73 Objective.

Similar to No. 72  
but fitted with 2 3/8"  
dia. Lenses (No. 2  
thread).

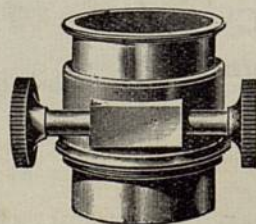
7" to 18" focus  
£2 12 6

## RACK JACKETS (C)

### No. 74 Jacket.

To carry No. 80 or  
82 Lens Cylinder.

£1 2 6

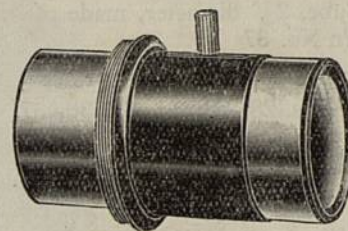


### No. 75 Jacket.

To carry No. 81  
or 83 Lens Cylinder.

£1 7 6

## JACKETS AND CYLINDERS (C).



A new combined Jacket and Cylinder fitted with 2" or 2 3/8" dia. Lenses 6" to 20" focus. Three patterns are available, Brass Lacquered Jacket and Polished Cylinder, Crystalline Enamel Jacket and Plated Cylinder, or Heavy All Chromium Plated Jacket and Cylinder. All patterns are made with simple focussing adjustment.

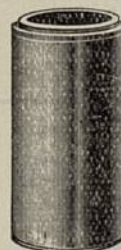
	Lacquered Jacket Polished Cylinder	Crystalline Jacket Plated Cylinder	Heavy Chromium Plated
No. 76 (2")	35/-	35/-	45/-
No. 77 (2 3/8")	47/6	47/6	57/6

Suitable for all Lanterns except No. 27.

## LENS CYLINDERS (C).

No. 80—Fitted with 2" dia. Lenses 6" to  
20" Focus ... .. £1 5 0  
(Fits No. 74 jacket)

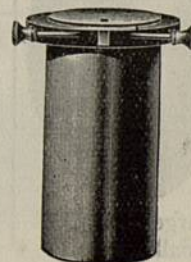
No. 81—Fitted with 2 3/8" dia. Lenses 7" to  
20" Focus ... .. £1 18 6  
(Fits No. 75 jacket)



## LENS CYLINDERS (C).

No. 82—Fitted with 2" dia. Lenses  
and Hinged Flasher (fits  
No. 74 Jacket) 6" to 20"  
focus ... .. £1 10 0

No. 83—Fitted with 2 3/8" dia. Lenses  
and Hinged Flasher (fits  
No. 75 Jacket) 7" to 20"  
focus ... .. £2 2 0





## EXTENSION TUBES (I)

No. 1. Extension Tube,  $2\frac{3}{8}$ " diameter, made of brass and threaded for Lantern No. 37

No. 2. Extension Tube, 3" diameter, as above but threaded for Lanterns. Nos. 28, 29, 30, 31, 36, 37, 38, 39.

	Length	2"	3"	4"	6"
No. 1 ... ..		6/6	7/-	7/6	8/6
No. 2 ... ..		8/-	8/6	9/6	10/6

### FLANGES (I)



No. 1 Thread 5/6  
No. 2 Thread 7/6

### APHENGESCOPE (I)



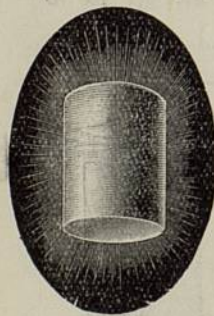
Made in japanned tinned iron and fitted with brass flange to carry Objective.  
Price 15/-

### ADAPTOR (I)



No. 2 Thread to No. 1 Thread 5/6

### LIME PASTILS (C)



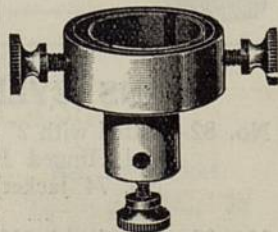
Large size 3/6  
Small size 3/-

### LIMES (C)



Best quality Hard Limes in sealed tins.  
6 in Tin (large) ... 4/-  
12 in Tin (small) ... 5/-

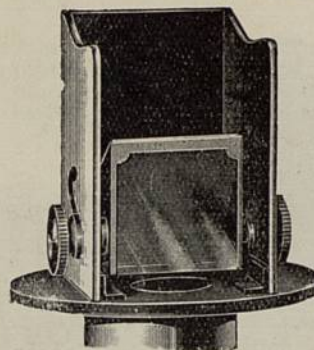
### PASTIL HOLDER (C)



Ferrule pattern 2/6

## PRISMS (for Demonstrator Lanterns) (I)

No. 84



Silvered Prism for reflecting or erecting purposes for use with No. 23A Lantern. Fits on 4D Lens Cylinder.

Price £6 6 0

## PROJECTION MICROSCOPES (I)

No. 85

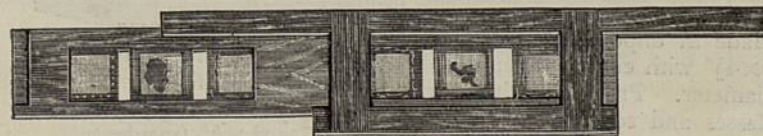


No. 1 Projection Microscope. Made to screw on to the flange of the sliding tube of the lantern body in place of the objective. Made of brass, highly polished and lacquered, with two slots and diaphragm, mounted on internal spring. This holds the slide, live box or animalculæ tank, in position. Complete with two powers, 1-inch and  $\frac{1}{2}$ -inch non-achromatic, mounted in sliding tubes. (No. 2 Thread).

Price £2 5 0

## MICRO. SLIDE CARRIER (I)

No. 86



For 3" x 1" Microscopic Slides ... .. Price 4/-

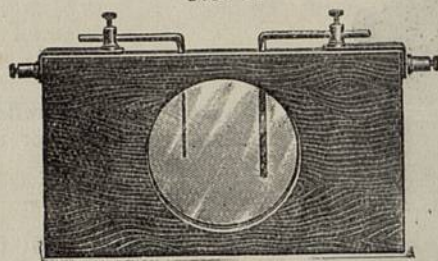


## NOZZLES AND ELECTROLYTIC TANK (I)

No. 87



Parallel  
Beam Nozzle  
Price £1 5 0



Electrolytic Tank  
Similar to No. 1 Chemical  
Trough, but fitted with ter-  
minals and copper electrodes.  
Price 15/-

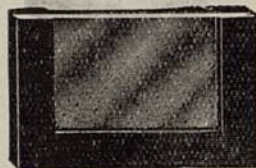


Pencil  
Beam Nozzle  
Price 7/6

## MICRO. TANK (I)

No. 88

Made entirely of glass,  
suitable for  
No. 1 Projection  
Microscope.



Price  
19/6

## CHEMICAL TROUGH (I) ALUM TROUGH (I)

No. 89.



Made in unpolished mahogany  
 $7 \times 4\frac{1}{2}$ " with circular opening 3"  
diameter. Provided with two  
glasses and separated by stout  
india rubber.  
Price 6/6

No. 90.



Made of glass and bound at the  
edges with japanned tinned iron,  
absolutely watertight. Size  
 $7 \times 4\frac{1}{2} \times \frac{5}{8}$ " (inside).  
Price £1 1 0

## RACKWORK ASTRONOMICAL SLIDES (I)

No. 91

A comprehensive series of mechanical slides for illustrating the science of  
physiography. They are carefully made, and the movements are accurately  
timed so as to work in correct ratios. The slides have 3-inch diameter pictures,  
hand painted, carefully coloured, and are carried in unpolished mahogany frames

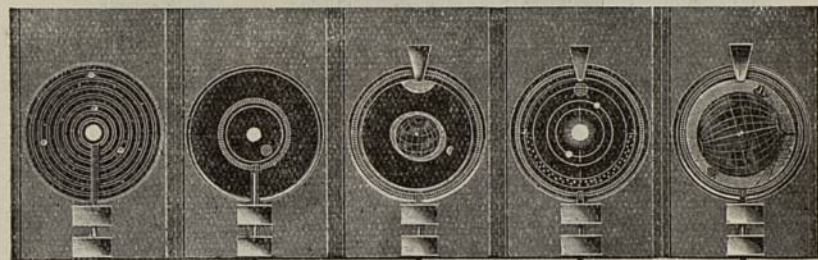
No. A

No. B

No. C

No. D

No. E



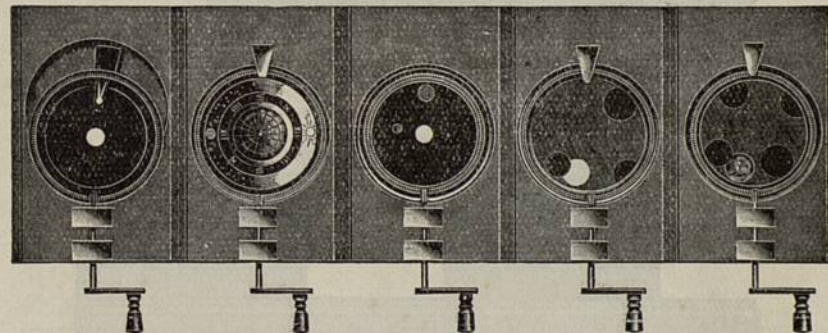
No. F

No. G

No. H

No. I

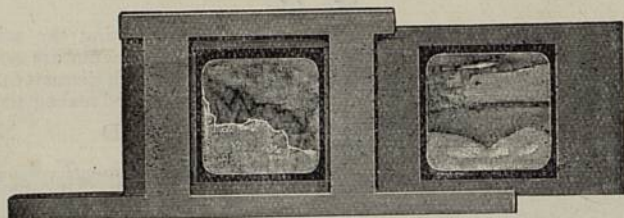
No. J



	Price each
No. A—The Solar System, showing the revolution of all the Planets with their Satellites round the Sun ... ..	1 8 6
No. B—The Earth's annual motion round the Sun, showing the parallelism of its axis, producing the seasons ... ..	1 1 0
No. C—To illustrate the cause of Spring and Neap Tides and show the Moon's phases during its revolution ... ..	13 6
No. D—To illustrate the apparent direct and retrograde motion of Venus and Mercury, and also their stationary appearance ... ..	13 6
No. E—To prove the Earth's Rotundity ... ..	13 6
No. F—To illustrate the eccentric revolution of a Comet round the Sun, and show the appearance of its Tail at different points of its orbit... ..	1 3 0
No. G—The Diurnal Motion of the Earth, showing the Rising and Setting of the Sun, illustrating the cause of Day and Night... ..	13 6
No. H—To illustrate the Annual Motion of the Earth round the Sun, with the monthly lunations of the Moon ... ..	1 8 6
No. I—To show the various Eclipses of the Sun, with the Transit of Venus ... ..	13 6
No. J—To show the various Eclipses of the Moon ... ..	13 6
COMPLETE SET OF 10 SLIDES ... ..	8 17 6

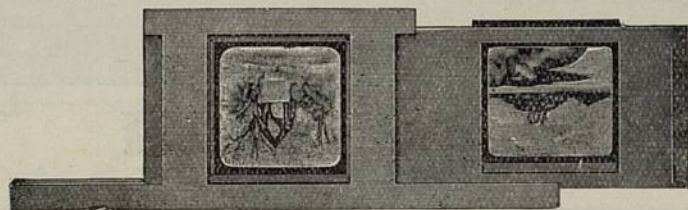


## SLIDE CARRIERS (C)



No. 92. Double Sliding Carrier, for  $3\frac{1}{4}'' \times 3\frac{1}{4}''$  Slides.

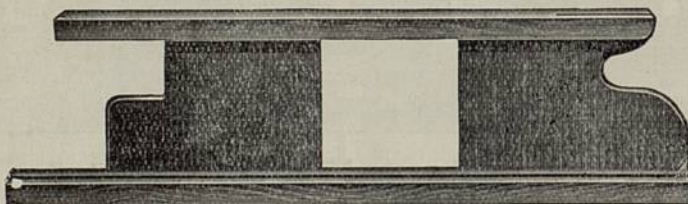
Price 3/-



Double Sliding Carrier with Lifter.

No. 93 ( $3\frac{1}{4}'' \times 3\frac{1}{4}''$  Slides) 4/-

No. 94 ( $4'' \times 3\frac{1}{4}''$  Slides) 4/6



No. 95. "Push-Thro" Carrier.

Improved type, takes  $3\frac{1}{4}'' \times 3\frac{1}{4}''$  and  $4'' \times 3\frac{1}{4}''$  Slides.

Price 3/6

## ECLIPSE CARRIERS.

Wooden Pattern	15/-	Brass Faced	17/6	Aluminium	42/-
Self-centreing	18/-	Self-centreing	20/-	Self-centreing	45/-

## SLIDE BOXES (C)

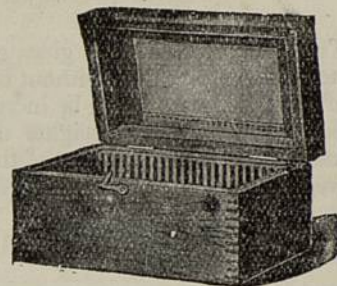
No. 96

### GROOVED SLIDE BOXES

Superior Dovetailed Boxes, made of American white wood, with grooves and numbers.

These boxes are only intended for storing slides.

Made to hold 24, 50 and 100 slides.



### Prices :

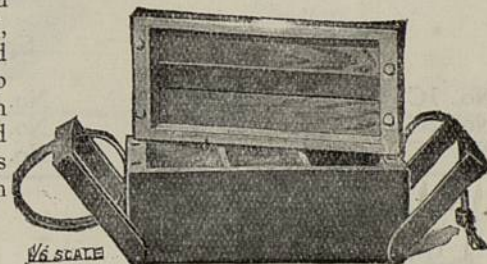
	Size 24	Size 50	Size 100
For $3\frac{1}{4}'' \times 3\frac{1}{4}''$	4/6	5/6	9/-
For $4'' \times 3\frac{1}{4}''$	6/6	7/6	11/-

## TRANSIT BOXES (C)

No. 97

Tongued and screwed American white wood, stained black, with padded removable partitions, top and bottom fitted with rubber pads, led secured by three dowels, and brass catches, fastened with strong leather strap.

To carry 75 slides.



### Prices :

	With Metal Clasps	Without Clasps
$3\frac{1}{4}'' \times 3\frac{1}{4}''$ Slides ... ..	7/-	5/-
$4'' \times 3\frac{1}{4}''$ Slides ... ..	10/-	8/-

## SLIDES MADE TO ORDER (E)

Special announcements and advertisements.

	FIRST COPY		REPEAT COPIES	
Prices :	Black and White FROM	Coloured FROM	Black and White FROM	Coloured FROM
Designing and making up	4/-	5/-	2/-	3/-
From Prints ... ..	2/6	3/6	1/3	2/3
From Negatives ... ..	1/9	2/9	1/-	2/-

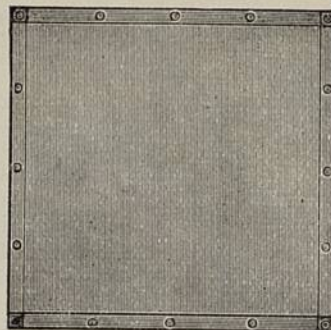






## CALICO SCREENS (C)

5' x 5' ...	14/-
6' x 6' ...	15/6
7' x 7' ...	19/6
8' x 8' ...	25/-
9' x 9' ...	32/6
10' x 10' ...	39/-
12' x 12' ...	47/6
14' x 14' ...	69/-
16' x 16' ...	87/6



3½' x 2½' ...	8/6
4' x 3' ...	10/6
5' x 4' ...	12/-
6' x 4½' ...	14/-
7' x 5' ...	15/-
8' x 6' ...	18/-
9' x 7' ...	25/-
10' x 8' ...	31/-

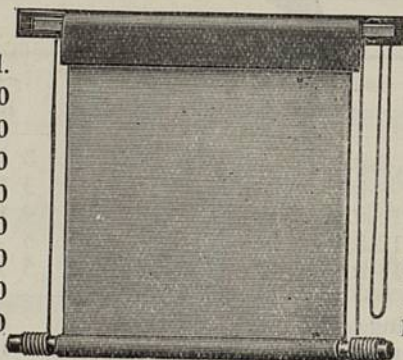
Made of best material, hemmed all round, fitted with Brass Eyelets or Tapes.

*Delivery from stock.*

## WHITE OPAQUE SCREENS (I)

Without Box

	£	s.	d.
5' x 5'	2	5	0
6' x 6'	2	10	0
7' x 7'	3	0	0
8' x 8'	3	10	0
9' x 9'	4	4	0
10' x 10'	5	0	0
12' x 12'	7	10	0
14' x 14'	10	0	0



With Box

	£	s.	d.
5' x 5'	3	9	0
6' x 6'	4	0	0
7' x 7'	4	14	0
8' x 8'	5	8	0
9' x 9'	6	4	0
10' x 10'	7	0	0
12' x 12'	9	15	0
14' x 14'	13	0	0

Made of very strong material, fitted with Roller and Batten, provided with Cords and Pulleys, Waterproof Cover, and supplied in boxes if required.

*Sizes up to 10 feet delivered from stock.*

*Screens in boxes delivery 7 days.*

## OPAQUE SCREEN PAINT (I)

¼ Gall. ...	15/-	½ Gall. ...	25/-	1 Gall. ...	45/-
-------------	------	-------------	------	-------------	------

## SILVER SCREENS (C)



The above Screens are made of very stout material, finished with best quality Silver Paint, giving a slight stippled effect, thus increasing the illumination. Each screen is mounted on split roller and batten, with black border. Cords and Pulleys or Stretchers can be supplied if required, at extra cost as below.

Prices :

	On Roller and Batten	Cords and Pulleys	Side Stretchers (per pair)
	£ s. d.	£ s. d.	
5-ft. x 5-ft.* ...	1 17 6	13 6	4/6
6-ft. x 6-ft.* ...	2 17 0	19 6	5/-
3-ft. x 2-ft. ...	1 1 0	9 6	3/-
4-ft. x 3-ft. ...	1 4 6	11 6	3/6
5-ft. x 4-ft. ...	1 11 6	11 6	3/9
6-ft. x 4½-ft. ...	1 18 6	19 6	4/-
7-ft. x 5-ft.* ...	2 17 6	1 0 0	4/6
8-ft. x 6-ft.* ...	3 13 6	1 1 0	5/-

*Delivery from stock, except those marked \* which can be supplied in 7 days.*

*Other sizes made to order.*

## SILVER SCREEN PAINT (I)

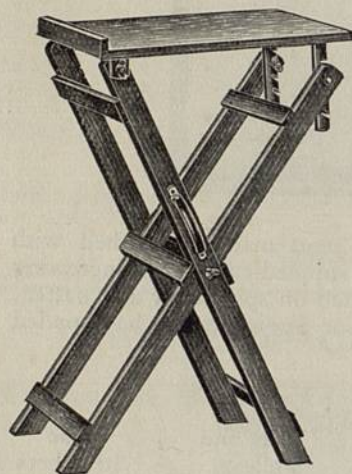
¼ Gall. ...	18/6	½ Gall. ...	25/-	1 Gall. ...	45/-
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## OAK LANTERN STAND (C)

No. 98

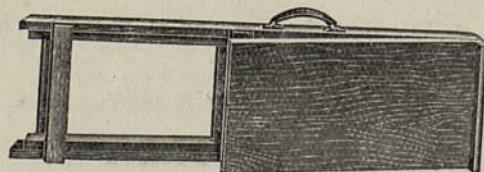
Folding Pattern.



Ready for use.

A feature of this stand is that it will fold up, as illustrated below, for transport, for which purpose it is fitted with a strong leather carrying handle. Height of stand with table level 36 inches.

Price £2 10 0



Folded for transport.

## LANTERN STAND (C)

No. 99



Fitted with solid oak top 24" x 12" x 1" thick fitted on telescopic steel tube legs which are easily removed for transit purposes. Can be raised or lowered as desired.

Height, Min. 24"  
Height, Max. 45"  
Weight 19 lbs.

Price

£2 2 0

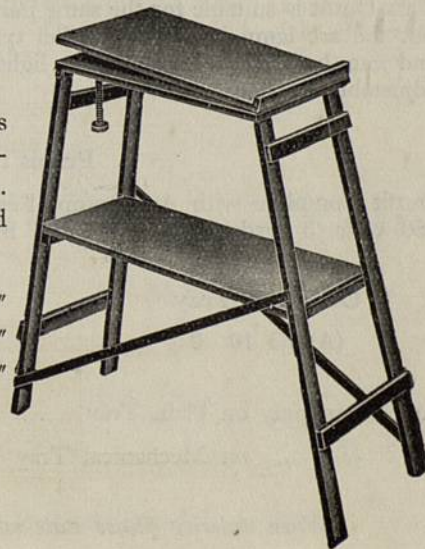
## LANTERN STAND (C)

No. 100

A light pattern stand with legs of solid oak, fitted with adjustable table also shelf underneath. Can be folded up and strapped together for transport.

Table Top ... 20" x 12"  
Middle Table ... 24" x 12"  
Height to Top Table 3' 8"

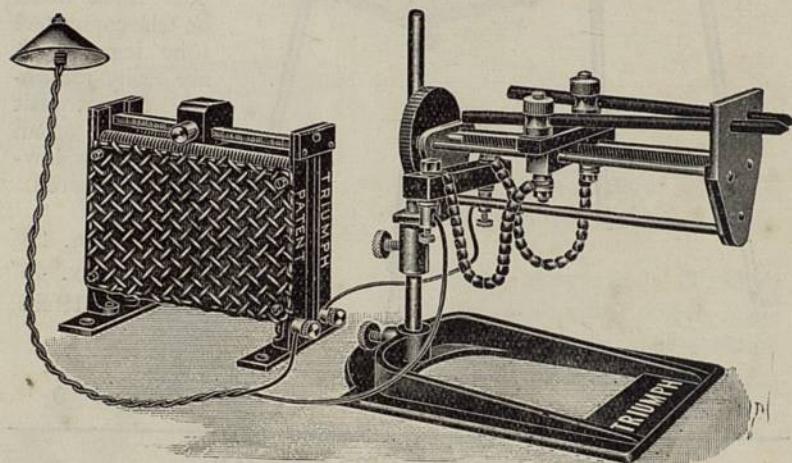
Price £1 17 6





## PARALLEL ARC LAMP OUTFITS (C)

No. 101



This Outfit is suitable for the same purposes as the Outfit on Page 31 but the arc lamp is of the parallel type instead of scissors pattern, and can be used off any house lighting supply by means of the adjustable resistance.

### Prices :

Outfit Complete with Arc Lamp, Resistance for all voltages up to 250 volts, 3 yards Flex, 2 Pin and B.C. Adaptor and 25 Carbons.

#### On Plain Tray

(A) £3 10 0

#### On Mechanical Tray

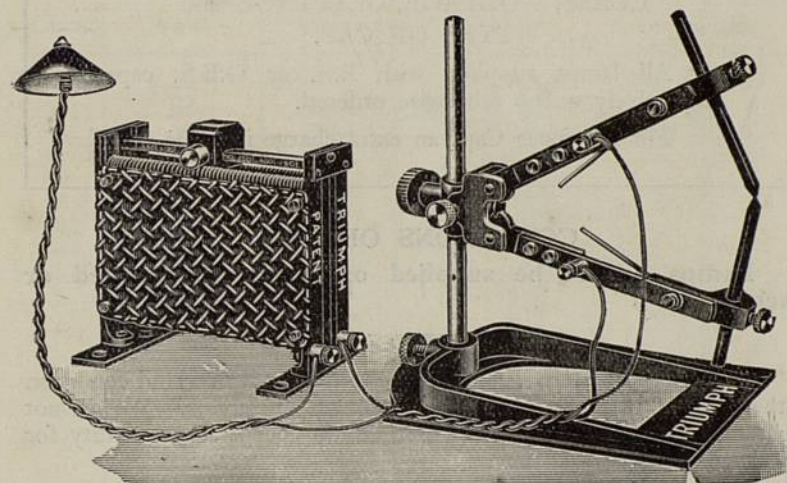
(B) £4 15 0

Arc Lamp only on Plain Tray	...	...	...	...	£1 5 0
" " " on Mechanical Tray	...	...	...	...	£2 10 0

*When ordering please state whether A.C. or D.C.*

## SCISSORS ARC LAMP OUTFIT (C)

No. 102



These Outfits are suitable for Optical Lanterns, Small Cinematograph Machines, Enlarging Lanterns. They are supplied with adjustable resistances which enables the Arc Lamp to be used off any house lighting circuit.

### Prices :

Outfit Complete with Arc Lamp, Resistance for all voltages up to 250 volts, 3 yards Flex, 2 Pin and B.C. Adaptor and 25 Carbons.

#### On Plain Tray

£3 5 0

#### On Mechanical Tray

£4 10 0

Arc Lamp only on Plain Tray	...	...	...	...	£1 2 6
" " " on Mechanical Tray	...	...	...	...	£2 7 6

*When ordering please state whether A.C. or D.C.*



## PROJECTOR TYPE LAMPS

When ordering please state full particulars of Lamp required, namely :

CLASS, VOLTAGE, WATTAGE and  
TYPE OF CAP.

All lamps supplied with E.S. or G.E.S. caps respectively unless otherwise ordered.

For Pre-focus Caps an extra charge is made.

### CONDITIONS OF SALE

Lamps cannot be supplied on approval, credited or exchanged.

### GUARANTEES.

We test every lamp and guarantee to deliver it in sound condition either at our premises or at our customers' premises. We do not guarantee the life of any lamp, nor do we accept responsibility for breakage in use.

### DAMAGE IN TRANSIT.

Lamps damaged in transit will only be replaced on the following conditions :—

Customers must immediately on arrival of the lamp examine it carefully, and make certain that the bulb is not broken, the filaments intact, and the lamp is the correct voltage and wattage.

If any fault exists the lamp must be returned immediately by our messenger, or parcel post, carriage paid. If any lamp is used, or delay occurs in returning the lamp, we shall decline to replace it.

If a lamp appears faulty, we are prepared to return it to the manufacturers for report, and their decision will be accepted as final.

If they decide to credit or replace, we shall be quite pleased to pass same on to our customer.

### NOTICE.

To help our customers in selecting the correct size Focuslite lamp, under favourable conditions, it is advisable to allow at least **5 watts per square foot** of screen surface for standard size slide Projection and **7 watts per square foot** of screen surface for standard size cinematograph Projection. Extra wattage must be allowed for densely coloured slides or tinted films, also extra long throws.

## PROJECTOR TYPE LAMPS

Class	Volts	Watts	Cap	Price
A1	30	100	E.S.	12 0
"	32	165	E.S. or Pre-focus	22 6
"	30	250	E.S.	22 6
"	30	600	G.E.S.	38 0
"	30	900	G.E.S.	35 0
"	50	200	E.S. or Pre-focus	21 0
"	50	250	E.S. or Pre-focus	22 6
"	50	500	E.S. or G.E.S.	26 0
"	60	100	E.S.	12 6
"	60	150	E.S.	17 6
"	100/250	100	E.S. or Pre-focus	10 9
"	100/110	250	E.S. or Pre-focus	20 0
"	200/250	250	E.S. or Pre-focus	21 0
"	100/250	500	E.S. or Pre-focus	25 0
"	100/250	1000	G.E.S.	32 0
A3	100/250	100	E.S.	10 9
"	100/110	250	E.S.	20 0
"	200/250	250	E.S.	21 0
"	100/250	500	G.E.S.	28 6
B	100/250	100	E.S.	9 0
"	100/250	250	E.S.	19 0
"	100/250	500	E.S. or G.E.S.	25 0
"	100/250	1000	G.E.S.	32 0
F	6	24	E.S. or S.E.S.	4 3
"	12	24	S.E.S.	3 9
"	12	48	E.S. or S.E.S.	3 9
"	12	100	E.S.	10 9
"	12	300	E.S.	32 6



# SPARE PARTS FOR "TRIUMPH" FOCUSLITE OUTFITS (C)



No. 1  
B.C. Bakelite  
Adaptor  
6d.



No. 2  
B.C. Bakelite  
Lampholder  
9d.



No. 3  
E.S. Holder for No.  
7 Outfit (old type)  
1/-



No. 4  
Lampholder for  
No. 11 Lamp Arm  
3/6



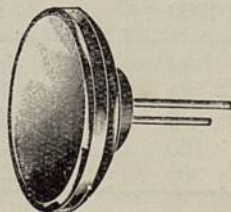
No. 5  
G.E.S. to E.S.  
3/6



No. 6  
G.E.S. Holder for  
No. 17 Lamp Arm  
5/-



No. 7  
Mirror Clip  
for No. 108 Outfit  
2/3



No. 8  
4" Mirror in Mount  
8/6

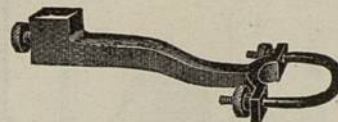


No. 9  
4" Mangin Mirror  
for use with  
No. 7 Mirror Clip  
5/6

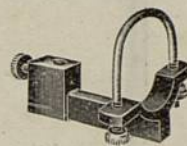
# SPARE PARTS FOR "TRIUMPH" FOCUSLITE OUTFITS (C)



No. 10  
Clamp for No. 8  
1/6



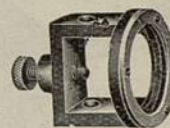
No. 11  
Lamp Arm and Screws  
For No. 4 Holder  
3/-



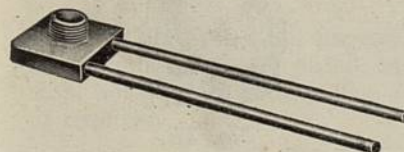
No. 12  
'O' Lamp Arm  
for No. 4 Holder  
3/-



No. 13  
Lamp Arm and Screws  
For No. 22 Lamp Holder  
3/-



No. 14  
Lamp Arm for  
No. 22 Lamp Holder  
3/-



No. 15  
Lamp Arm  
For No. 23 Holder  
1/3



No. 16  
Lamp Arm  
For No. 3 Holder  
9d.



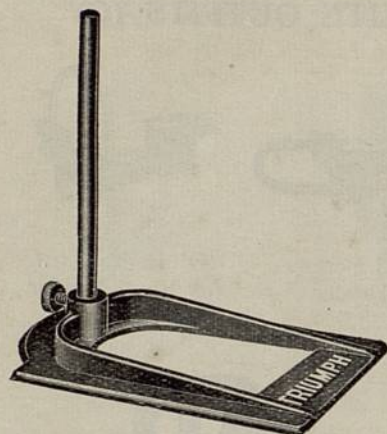
No. 17  
Lamp Arm  
For No. 6 Holder, G.E.S.  
3/6



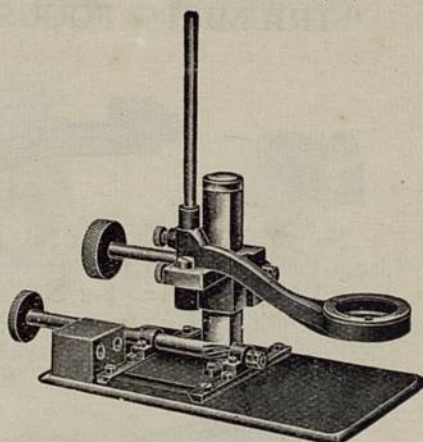
No. 18 Flex  
2 1/2 amps Maroon or 6d. yard  
Blue-Black  
10 " Red-black 1/- "  
20 " Red-black 2/- "



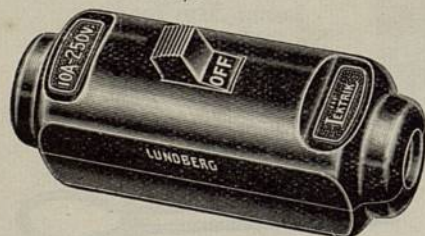
# SPARE PARTS FOR "TRIUMPH" FOCUSLITE OUTFITS (C)



No. 19  
Aluminium Tray and Post  
3/6



No. 20  
Mechanical Tray, as illustrated, 32/-  
Without Lamp Arm, 28/6



No. 21  
Double Pole 10 amp Switch  
5/-



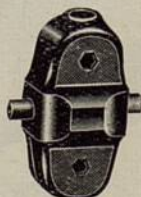
No. 22  
Lamp Holder  
For No. 13 Lamp Arm  
3/-



No. 23  
Bakelite E.S. Holder  
for No. 15  
Lamp Arm, 1/9



No. 24  
2 Pin B.C. Adaptor  
1/-



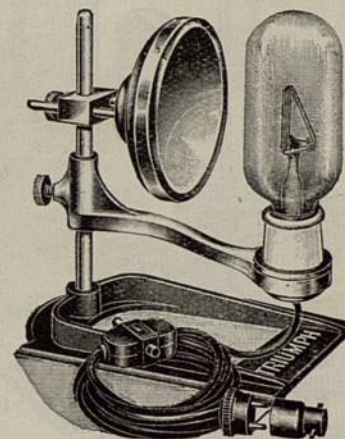
No. 25  
5 amp Switch  
1/6

# "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 103

For use with Class A1 Projector Lamps up to 500 watts.

For  
Price  
of  
Lamps  
see  
Page 33



Outfit on Plain Tray

For  
Use  
Direct  
from the  
Current  
Supply

This Outfit has been improved, the tray finished in blue enamel, other parts chromium plated, fitted with 2-pin B.C. plug, porcelain E.S. holder, new pattern flex, and bakelite 5 amp. (No. 25) switch if required.

## Prices :

(A)	Outfit on Plain Tray, With Switch...	...	...	£1 3 0
(B)	" " " " Without Switch	...	...	£1 1 6

These Outfits can be supplied on Mechanical Trays if required at 25/- extra on above prices.

When ordering, please state voltage and wattage of lamps required.

(Lamps extra).

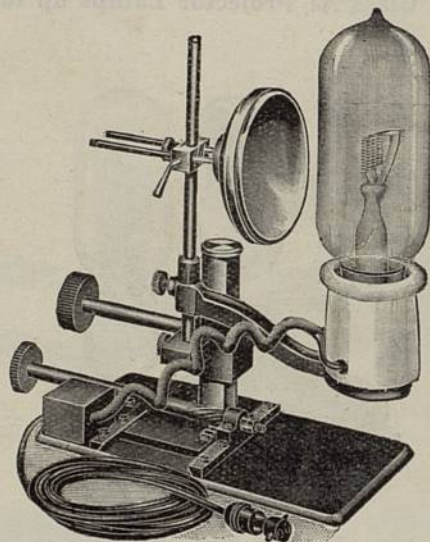


## "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 104

For use with 200/250 volt 1000 watt Projector Lamps A1.

For  
Price  
of  
Lamps  
see  
Page 33



Outfit on Mechanical Tray

This Outfit is similar to the No. 103A except that it is fitted with a G.E.S. holder, for 1000 watt lamp, 2-pin B.C. plug, new pattern flex, and switch No. 25 if required.

### Prices :

(C)	Outfit on Plain Tray, <b>With Switch</b> ...	...	...	£1 7 0
(D)	" " " " <b>Without Switch</b>	...	...	£1 5 6

For use with 110 volt 1000 watt lamps.

This Outfit *cannot* be used from a lighting circuit (therefore no adaptor is supplied), but 10 amp. flex is fitted, also 10 amp. (No. 21) D.P. switch if required.

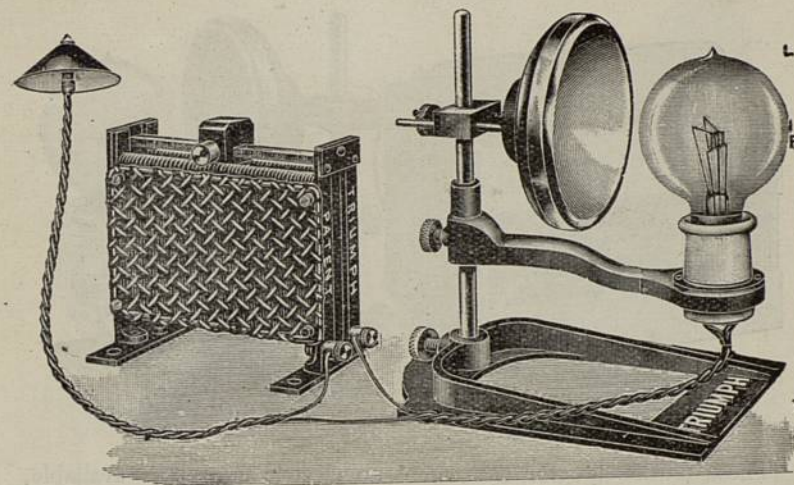
(E)	Outfit on Plain Tray, <b>With Switch</b> ...	...	...	£1 12 6
(F)	" " " " <b>Without Switch</b>	...	...	£1 7 6

Outfits on Mechanical Trays 25/- extra.

(Lamps extra).

## "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 105.



These Outfits are similar in construction to those illustrated on pages 37 and 38, but with the addition of an adjustable resistance for using a specified voltage lamp on any electric supply up to 250 volts. A most convenient outfit for travelling purposes.

### Prices :

For use with		Outfit on Plain Tray	
		Without Switch	With Switch
(A)	12 volt 24 watt Lamp	£2 17 6	£2 19 0
(B)	12 " 48 " "	£3 2 6	£3 4 0
(C)	32 " 165 " "	£3 5 0	£3 6 6
(D)	30 " 250 " "	£5 5 0	* £5 10 0
(E)	30 " 600 " "	£9 5 0	* £9 10 0
(F)	30 " 900 " "	£11 5 0	* £11 9 6
(G)	50 " 250 " "	£3 0 0	£3 1 6
(H)	100 " 250 " "	£2 18 6	£3 0 0
(I)	100 " 500 " "	£3 5 0	£3 6 6
(J)	100 " 1000 " "	£5 5 0	* £5 10 0

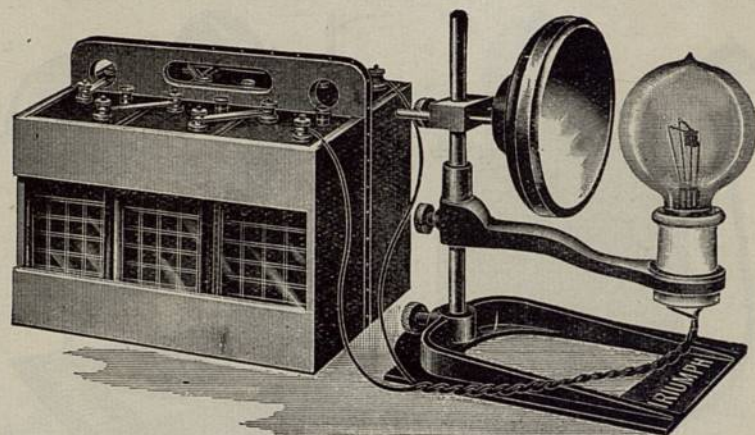
Outfits marked \* cannot be used off Lighting Circuits.  
For Mechanical Tray Outfits add 25/- to above prices.

For prices of Lamps see page 33.



## "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 106.



These Outfits are for use where no electric current is available, and are supplied in strong teak cases. When fully charged are suitable for 4 to 5 hours run.

Each outfit is fitted with 5 amp (No. 25) or 10 amp (No. 21) switch respectively.

### Prices :

For use with				Outfit on Plain Tray	
(A)	6 volt	24 watt	Lamp ... ..	£1	2 6
(B)	12 "	48 "	" " " " " " " "	£1	2 6
(C)	12 "	100 "	" " " " " " " "	£1	8 0

For Mechanical Tray Outfits add 25/- to above prices.

## ACCUMULATORS (I)

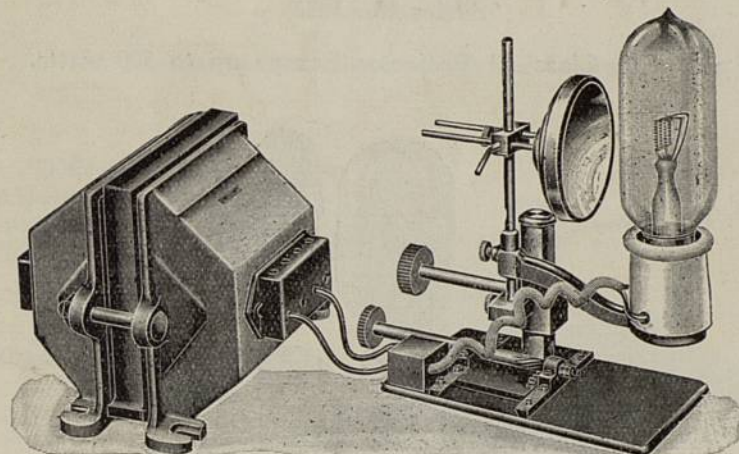
For use with above lamps.

				With Case	Without Case
(A)	6 volt	24 watt	... ..	£1 17 6	£1 12 6
(B)	12 "	48 "	" " " " " " " "	£3 15 0	£2 19 6
(C)	12 "	100 "	" " " " " " " "	£7 10 0	£6 10 0

For prices of Lamps see page 33.

## "TRIUMPH" FOCUSLITE OUTFITS (C)

Series No. 107.



Great economy is effected by employing low Voltage, high Amperage Lamps with concentrated filaments, and a special Transformer to reduce the Voltage to that required by the Lamps, and this is accomplished without any appreciable loss of current.

One of the special features is that every set, except those marked with a star, can be employed off ordinary Lampholders. Another advantage is that those persons possessing one of the high power Outfits can always employ any of the lower power lamps with the Outfit. For example, with a 6C Outfit No. 6B Lamps can be used. A 10 amp. Double Pole Switch can be fitted if required (No. 21).

For full specifications of Transformers see pages 44 and 45.

Wherever Alternating Current is available, we strongly advise the use of these Sets, and particularly draw attention to the very high candle-power obtainable from the low current consumption, as shown by the scale below.

No.	For use with Lamp. volts. watts.		Approximate Current Consumption on 100-110 volts. 200-250 volts.		PRICES	
					without switch.	with switch.
B.	30	250	3 amps.	1½ amps.	£4 7 6	£4 12 6
C.	30	600	*6 amps.	3 amps.	£5 10 6	£5 15 6
D.	30	900	*9 amps.	4½ amps.	£7 7 6	£7 12 6

Outfits on Mechanical Tray 25/- extra.

Prices are for 50/100 cycles. 25 cycles 20% extra. 40 cycles 15% extra.

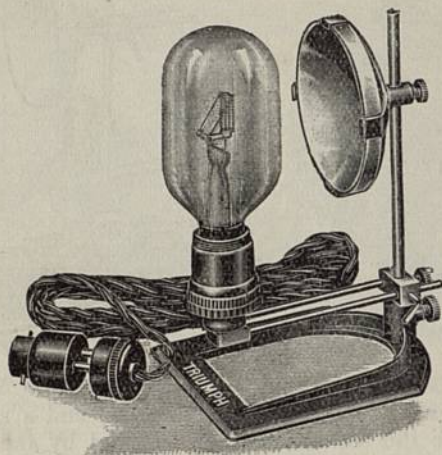
**Important.**—It is absolutely necessary when ordering to state the exact Voltage and Periodicity (if under 50) of the Current on which the Outfit is to be employed. 12ft. of Flex is supplied to connect Mains to Transformer, and 6ft. of Cable to connect Transformer to Outfit. Other sizes of Transformers can be supplied on receipt of data.



## “TRIUMPH” FOCUSLITE OUTFITS (C)

Series No. 108.

For use with Class A1 Projector Lamps up to 500 watts.



Outfit on Plain Tray

This Outfit is similar to the No. 1 Series, but is fitted with a *Bakelite* E.S. Holder, 2-pin B.C. Plug, New Type Flex, and 5 amp. Bakelite Switch No. 25 if required.

For use direct from the current supply.

### Prices :

A.	Outfit on Plain Tray	With Switch	...	...	18	0
B.	„ „ „ „	Without Switch	...	...	16	6

(Lamps extra).

For price of Lamps see page 33.

## “TRIUMPH” FOCUSLITE OUTFITS (C)

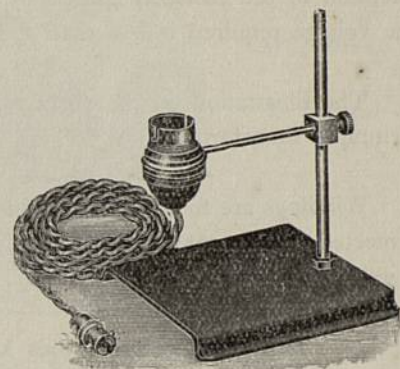
Series No. 109.

For use with Ordinary Lighting Lamps.

This is a cheap outfit for amateur use. Cast iron Tray finished in brown, bakelite B.C. Holder, Flex, and B.C. Adaptor.

Price Complete 6/6

These Outfits are only supplied complete.



## “TRIUMPH” FOCUSLITE OUTFITS (C)

Series No. 110.

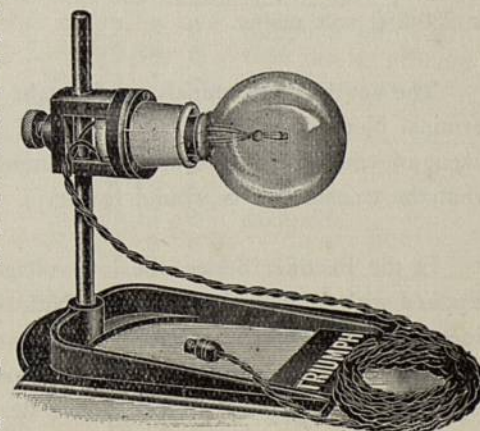
For use with Class A3 Projector Lamps 100 and 250 watts.

The lamps burn in the position illustrated. The Outfits will be found very useful for home Cinematograph Machines, Optical Lanterns, Enlargers and numerous other purposes. They can be used off any lighting circuit without a Resistance, on alternating or direct current.

### Price :

Outfit on Plain Tray, 11/6

For Price of Lamps, see page 33.





## "TRIUMPH" TRANSFORMERS (C)

Alternating current becoming more universal, we draw your attention to the economy gained by means of a Transformer when the voltage required is less than the mains voltage.

The illustration on the next page shows the improved type of Triumph Transformer.

Windings are totally enclosed in a metal case, and the terminals protected to prevent one accidentally touching a live wire. Also a metal carrying handle is provided.

They are suitable for various kinds of work and should take the place of resistances as a more economical method of obtaining reduced voltages.

In the No. 6 Series, the high voltages sizes (200/250), the primary side is brought out to three shrouded connecting pins, and connected to the mains by means of a detachable two socket plug; by connecting on to either pair of pins, the Transformer can be used on either 200/220 or 230/250 volt mains.

The secondary terminals are brought out to a 4-way projected terminal block giving 3, 5, 8, 22, 25 and 30 volts. (Care must be taken, of course, that the secondary amperage is not greater than what the transformer is wound to carry).

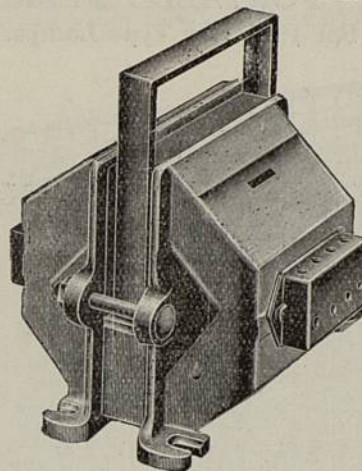
In the Rectifier Series, the low voltage sizes 100/110 volts, are supplied with 12 feet of twin flex on both the primary and secondary sides. In the high voltage sizes (200/250 volts) the primary terminals are brought out to a suitably protected terminal block marked 200/220 volts and 230/250 volts. 12 feet of twin flex is supplied on secondary side only.

## "TRIUMPH" TRANSFORMERS (C)

No. 112.

All  
Transformers  
are  
Auto-wound.

Suitable for  
50-100 cycles.  
Single Phase.



25 Cycles  
20% extra.

40 Cycles  
15% extra.

	Primary Voltage	Secondary Volts	Amps	PRICE	REMARKS
No. 107 Series	100/110	22, 25, 30	10	£3 0 0	Primary Side, 12ft. twin flex supplied.
	100/110	22, 25, 30	20	£3 17 6	
	100/110	22, 25, 30	30	£5 17 6	
	200/220 and 230/250	22, 25, 30	10	£3 5 0	Primary side, price includes socket plug for voltage selector.
		22, 25, 30	20	£4 5 0	
		22, 25, 30	30	£6 0 0	
Rectifier Series.	100/110	25	5	£2 8 0	Supplied with 12 ft. twin flex on primary and secondary sides.
	100/110	50	5	£2 10 0	
	100/110	50	10	£3 7 0	
	100/110	50	15	£3 13 0	
	200/220 and 230/250	25	5	£2 12 0	Supplied with 12 ft. twin flex on secondary side.
		50	5	£2 17 6	
		50	10	£3 17 0	
		50	15	£4 8 0	
	Any named voltage up to 250	70-75	30	£7 0 0	Suitable for Arc Lamps with a resistance in circuit, and are D.W. open type.
		70-75	40	£8 10 0	

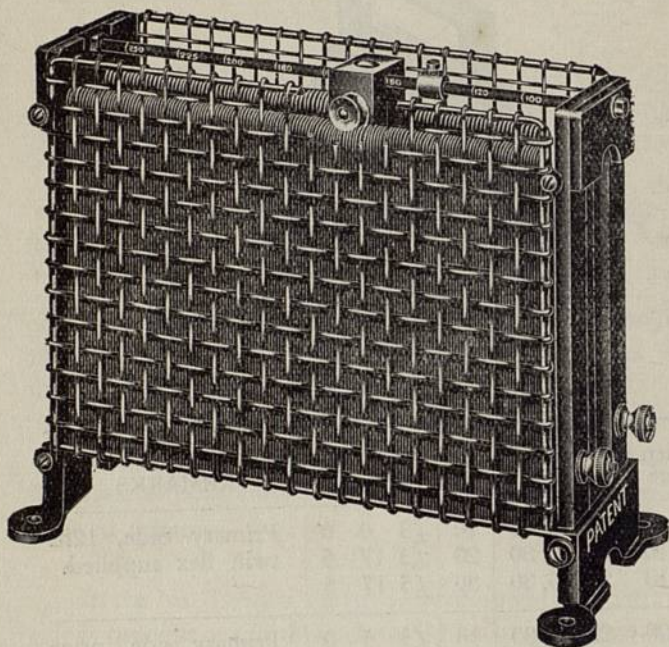
We shall be pleased to quote for any transformer not listed. Particulars required—Mains or Primary Voltage, Cycles, Phase, Secondary Voltage and Maximum Amps., Auto or Double Wound.



## "TRIUMPH" PORTABLE RESISTANCES (C)

For Projector Type Lamps.

No. 111.



These Resistances are our own special patent and manufacture, composed of an Iron Frame, asbestos covered, wound with best quality Resistance Wire, fitted with Brass Bar across the top, on which runs our Patent Roller Contact & Rocker Bearings. A Wire Guard is fitted to each side of Resistance.

For use on all voltages up to 250.

**B.2.**  
For use with  
12 volt 24 watt  
110 " 250 "  
Price  
£1 15 0

**B.4.**  
For use with  
12 volt 48 watt  
32 " 100 "  
50 " 200 "  
50 " 250 "  
52 " 260 "  
100 " 300 "  
Price  
£1 17 6

**C.10.**  
For use with  
30 volt 250 watt  
110 " 750 "  
110 " 1000 "  
Price  
£3 19 6

**C.20.**  
For use with  
30 volt 600 watt  
Price  
£7 19 6

**C.5.**  
For use with  
12 volt 72 watt  
32 " 165 "  
110 " 500 "  
Price  
£2 2 0

**C.30.**  
For use with  
30 volt 900 watt  
Price  
£9 17 6

When ordering please state Lamp to be used.

## HIRE TERMS FOR APPARATUS

	Per night	Per week
Optical Lantern Complete (without illuminant) ...	12/6	50/-
Optical Lantern Complete with Focuslite Outfit (no lamp) ...	15/-	57/6
Optical Lantern Complete with Focuslite Outfit (no lamp), 8-ft. Calico Screen and Stand ...	21/-	75/-
Stage Box Complete with Arc Lamp and Carbons	10/6	35/-
Spotlight Complete on Stand (no lamp) ...	15/-	57/6

A deposit is required in all cases, except regular customers who have a ledger account.

We cannot, under any circumstances, let out on hire Projector Type Electric Lamps for any of the above articles.

Should any of the above articles be returned in damaged condition, cost of repairing will be charged to customer.

## CINEMATOGRAF & LANTERN EXHIBITIONS

	Per show
Optical Lantern, Focuslite Outfit, 8-ft. Screen and Operator ...	42/-
Portable Cinematograph, Screen and Operator ...	63/-

The above named prices do not include the necessary carriage and travelling expenses (Taxi and Railway Fares) incurred in conveying the apparatus to and from the place of exhibition, which are extra.

Additional charges are made when Operator is compelled to stay overnight.

Ample notice should be given, so that apparatus is available.

When an operator is required, at least 7 clear days' notice should be given.

The following information is always required.

Voltage of electric supply.

Maximum amperage available.

Size of Screen.

Distance from Screen to the position the apparatus will be placed.



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**Section**

**No.**

**35**

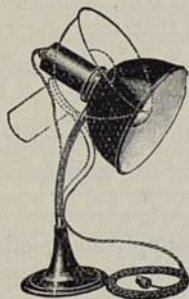
**MIRROR BOWLS**



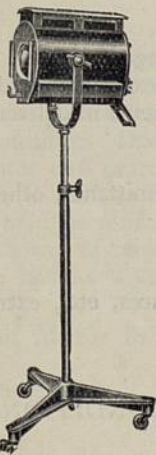
**BATTENS**

**FOOTLIGHTS**

**SPOTLIGHTS**



**FLOODLIGHTS**



**SHOP LIGHTING**

**16mm TITLE OUTFITS**

**16mm REWINDERS**

**RECTIFIERS**

**and All Cinematograph  
Accessories**



W.D.  
80  
230  
BR



## TERMS OF BUSINESS.

All prices in our list are subject to revision without notice, but we will endeavour to maintain these prices for season 1934-35.

We reserve the right to depart from the specifications and illustrations without notice.

### ACCOUNTS.

Customers who require to open credit accounts should furnish two trade references.

2½% settlement discount, 28 days, otherwise strictly nett.

### CARRIAGE.

All carriage charges are payable by the customer, and we always despatch goods by the cheapest route, unless we receive definite instructions to send by express post or passenger train.

### PACKING.

All packing charged at cost, and cases charged at 2/- or over will be credited on condition that they are returned within one month, carriage paid.

### RETURNS.

Any goods supplied to a definite order cannot under any circumstances be accepted back for credit.

### APPROVAL.

We regret we cannot supply any goods on approval, unless special arrangements are made with the directors in writing.

### DAMAGE IN TRANSIT.

We do not hold ourselves responsible for damage to goods in transit, and all goods received should be immediately examined, and a claim lodged with the Carrier for breakage, within 24 hours of delivery.

### EXPORT ORDERS.

All export orders must be accompanied by full remittance, otherwise they will be sent C.O.D.

### SHIPPING CHARGES.

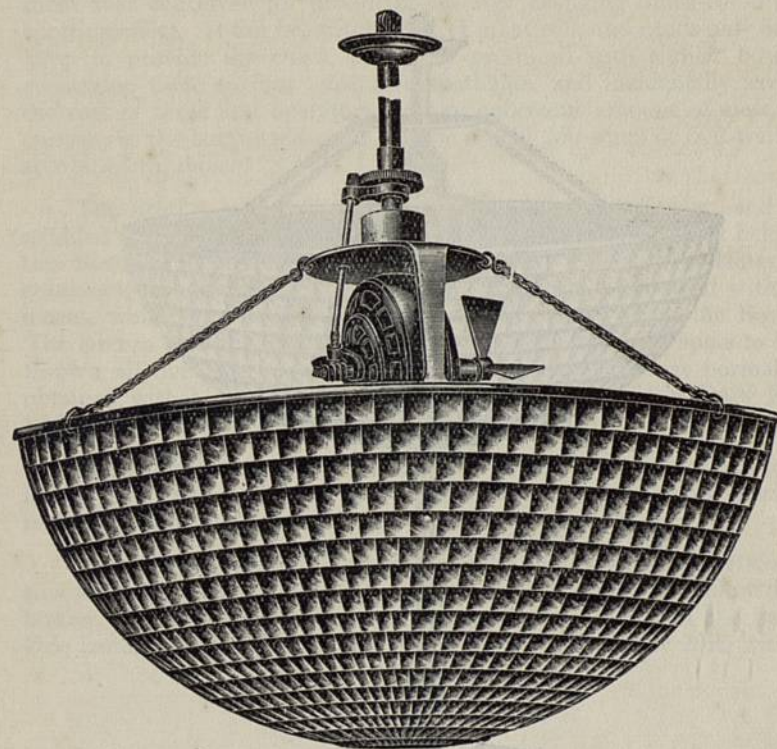
All Shipping Charges, Customs Duties, Insurances, etc., extra.

ORDERS ARE ONLY EXECUTED ON ABOVE CONDITIONS.

## PRISMATIC MIRROR BALL (I)

For use with Spotlight Projectors.

No. 50.



For producing wonderful effects in ballrooms, theatre stages, in fact anywhere that is equipped with spotlights.

The illustration shows a half ball 24 inches wide, made of spun aluminium fitted with 700 mirrors and a specially constructed motor and gearing for revolving the ball at a low speed.

When the beams of light from the spotlights are directed on the bowl, it is reflected back into every part of the room in the form of a shower of moving spots, but if coloured beams are projected on to the bowl a wonderful colour changing effect is produced.

#### Prices :

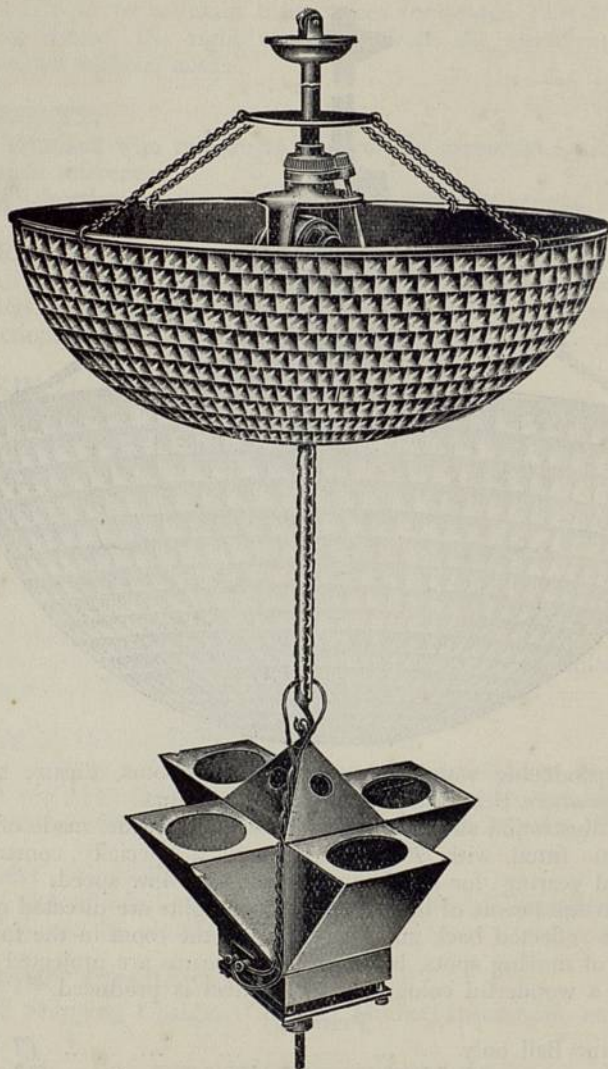
Half Mirror Ball only	...	...	...	...	£7 10 0
" " " with Motor and Gearing	...	...	...	...	£13 5 0
Whole " " (Please state voltage and periodicity).	...	...	...	...	£27 15 0



## THE SELF-CONTAINED PRISMATIC MIRROR

No. 51.

Patent No. 270434



For Dance Rooms, Theatres, Bazaars, Cinemas, and every occasion where a wonderful colour spectacle is desired.

## Self-contained PRISMATIC MIRROR BOWL (I)

This entirely self-contained outfit is the most remarkable instrument ever conceived for producing an ever changing multi-coloured spotting effect. It can be switched off or on at will, and needs only one lamp to provide the effect, ordinarily produced with similar bowls employing three to four expensive spotlights, and incidentally saves the cost of these and operators, and an enormous amount of electric current, as the lamp itself need only be one of 250 watts or 500 watts, according to choice.

The Bowl is made of spun aluminium, 24" wide, 8" deep, and is studded with hundreds of small mirrors. Approximately 2 feet below the Bowl is suspended a special scientifically constructed lantern, containing one lamp only. The lantern, however, is provided with 4 lenses, which project four distinct coloured beams on to the Bowl. The lantern revolves, causing myriads of coloured moving spots to be thrown all over the room, with a brilliance equal to that normally obtained with high power projectors. THIS LANTERN CAN BE SUPPLIED IN GOLD OR SILVER FINISH AS REQUIRED.

The lantern is made to revolve by means of a special electric motor, concealed inside the Bowl, this being provided with special means of preventing the electric wires from twisting.

The length over all is approximately 3ft. 6ins., and therefore suitable for any room where the ceiling is sufficiently high to allow the bottom of the lantern to clear the heads of the persons in the hall. One lantern will be found suitable for rooms up to 60 or 70ft. wide.

### Prices :

Complete Outfit, including Mirror Bowl with Chains, Lantern, Reflectors, Lenses, Lamp Holders, Colours and Special Electric Motor and Gearing ...					£18 18 0
4-way Lantern only ...					£3 19 6
Special Motor and Gearing only ...					£7 15 0
Mirror Bowl and Chains only ...					£7 17 6

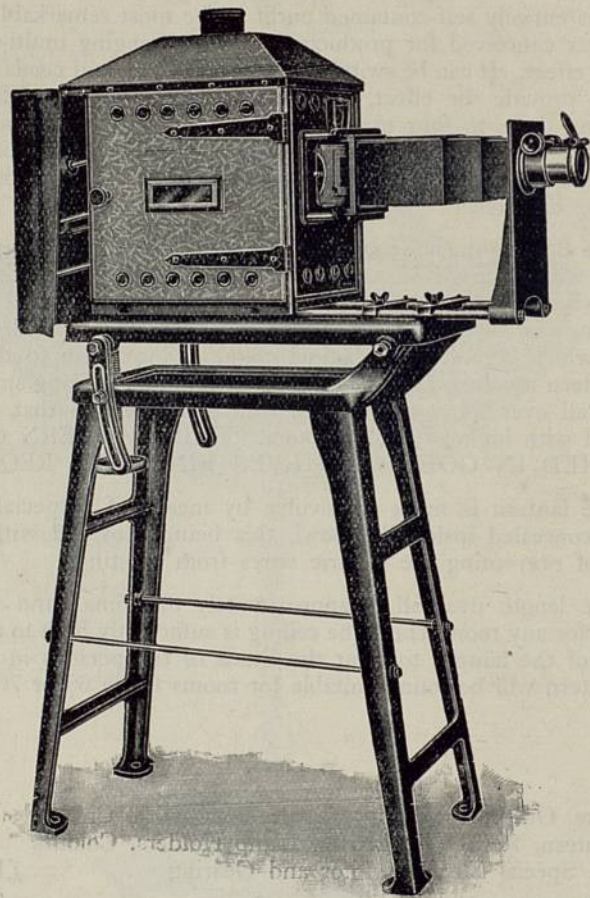
When ordering, the voltage and periodicity of the electric supply must be stated.

Projector type Lamps, Class A1, 250 or 500 watts, are suitable for this Mirror Bowl.



## CINEMA AND THEATRE LANTERN (I)

No. 52.



The Lamp House is made of sheet metal, crystalline enamelled, asbestos lined and air spaced. Fitted with  $4\frac{1}{2}$ " Condenser, easily detachable. Slide Carrier is aluminium and fitted to Stage. The telescopic tubes are sheet metal, and allow for very long focus lens being used. Adjustment is attained by means of two sliding rods, held in position by two clamps.

The whole body is mounted on heavy adjustable iron stand, with tilting device.

Price £10 10 0

Heavy Arc Lamps are available for this Lantern at very reasonable prices.

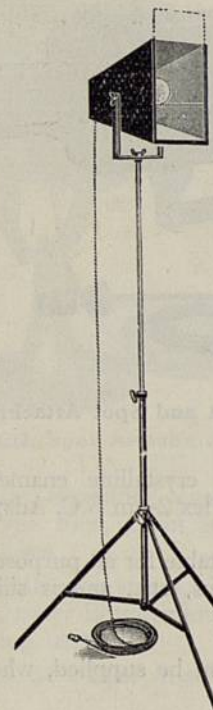
## "THE OPAL" STUDIO FLOODLIGHT (I)

No. 53.

Made of sheet metal, enamelled outside, matt white inside, fitted with either B.C. or E.S. Holder, 3 yards Flex and 2-pin B.C. Adaptor. Can be folded up and packed in small space.

THE  
HANDIEST and  
CHEAPEST  
FLOODLIGHT  
on the MARKET

NO GLARE.



Suitable for—  
Professional  
Photographers

Amateur  
Cine-Photographers

Floodlighting

Shop Window  
Displays

### Prices :

Complete as illustrated]	...	...	...	...	£1 15 0
On Stand No. 142 (page 67)	...	...	...	...	£1 5 0
Colour Frames	...	...	...	...	2 6
Stippolite Glass Diffusers	...	...	...	...	4 6

### OPAL LAMPS (E)

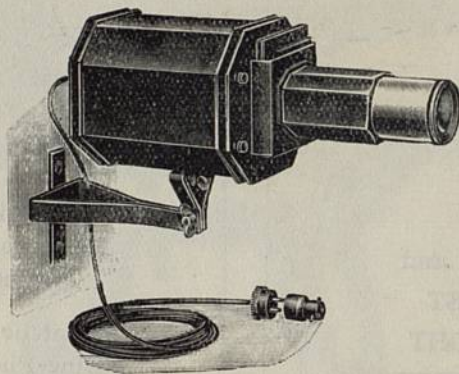
60 watt, 2/2	100 watt, 3/8	200 watt, 8/6	300 watt, 12/6
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## 100 WATT SPOTLIGHT (I)

No. 54.

For use with Class A.3. Projector Lamps 100 watts.



Spotlight and Spot Attachment.

New designed body, crystalline enamelled, fitted with E.S. Holder, 3 yards new type Flex 2-pin B.C. Adaptor and 4" Plano Lens.

This Spotlight is adaptable for all purposes, such as small stages, shop windows, dance rooms, etc., and is suitable for short throws of 2 to 10 feet.

A Spot Attachment can be supplied, where fine clear spots are required.

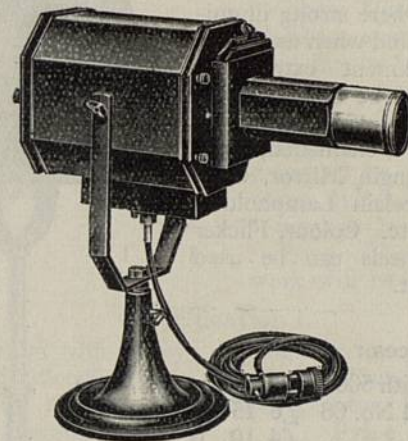
### Prices :

Spotlight as specified	...	...	...	...	£1 11 6
Spot Attachment with Diaphragm...	...	...	...	...	12 6
Colour Frames with Colour	...	...	...	...	1 3
Spare 4" Plano Lens for Spotlight	...	...	...	...	5 0
Spare 2½" Plano Lens for Spot Attachment	...	...	...	...	4 6

## 250 WATT SPOTLIGHT (I)

No. 55.

For use with Class A.1 Projector Lamps 250 watts.



Spotlight with Spot Attachment on Stand.

New designed body, crystalline enamelled, fitted with E.S. Holder, 3 yards new type Flex, 2-pin B.C. Adaptor, 4" Mangin Mirror, and 4½" Plano Lens.

This Spotlight is suitable for stages, shop windows, dance halls, studios, etc., but gives greater illumination than No. 54 owing to a more powerful lamp being used.

As in the case of No. 54 a Spot Attachment can be supplied for fine spotting work.

### Prices :

Spotlight as specified	...	...	...	...	£2 7 6
Spot Attachment and Diaphragm	...	...	...	...	13 6
Table Stand, 6" high	...	...	...	...	5 9
Colour Frames with Colour	...	...	...	...	1 6
Spare 4½" Plano Lens	...	...	...	...	6 0

Can be supplied on Bench Clamp or Wall Bracket (see page 68).



## FOCUSLITE SPOTLIGHT (I)

For Theatre Stages, Cinemas, Dance Halls and Photographic Studios.

These Spotlights are intended for professional use, where strong illumination is required, and when used with a spotting attachment extra fine spotting results can be obtained.

Each body is stove enamelled, fitted complete with Mangin Mirror, Condenser Lens, porcelain Lampholder, Switch and Plug, etc. Colour, Flicker and Rainbow Wheels can be used with this Spotlight.

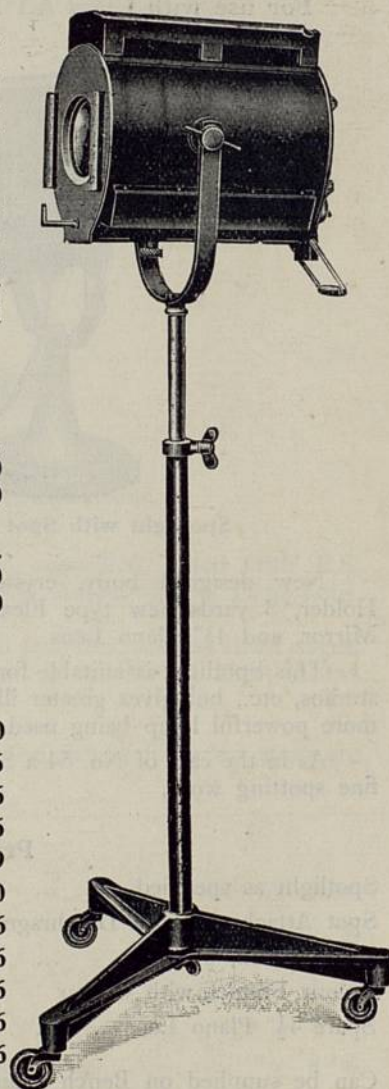
### Prices :

**No. 58.** For use with 500 watt Lamps.  
Complete on Stand No. 68 £6 15 0  
Without Stand ... £4 10 0

**No. 59.** For use with 1000 watt Lamps.  
Complete on Stand No. 68 £7 15 0  
Without Stand ... £5 10 0

### Accessories :

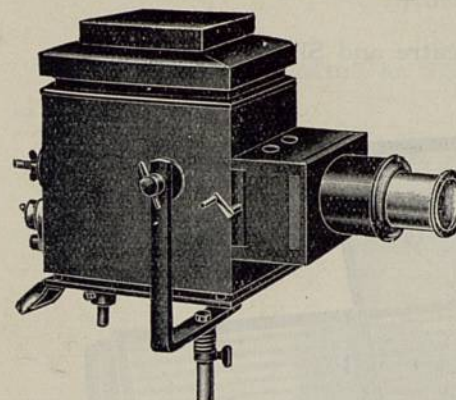
Spot Attachment and Diaphragms ...	£2 2 0
Colour Wheel and Spindle ...	£1 2 6
Flicker Wheel ...	19 6
Rainbow Wheel ...	£1 7 6
No. 58 Colour Frames ...	1 9
No. 59 Colour Frames ...	2 0
No. 58. 5×9 Plano Lens	7 6
No. 59. 6×9 Plano Lens	12 6
Table Stand, 6" high ...	5 6
Bench Clamp ...	7 6
Wall Bracket ...	7 6



## " UNIVERSAL " PROJECTORS (I)

No. 60 For use with 500 or 1000 watt Projector Lamps.

For use in Dance Halls, Theatres, Studios, and for exhibition of lantern slides and effects.



These Outfits can be used for flooding, spotting. Colour wheels etc., can be used, and also any of the effects listed below.

Lantern Slides can be exhibited, the distance and size of picture governed by a minimum of 6 ins. focus, and a maximum of 14 ins. focus lens being employed.

Prices of Lenses for lantern slide work will be found below.

### Specification :

Each body is fitted with removable sliding tube for flooding No. 1 Spotting Lens, two tinter frames, two spotting diaphragms, two 4½ ins. condensers, adjustable lamp holder, and Mangin Mirror in

aluminium mount.

Switch Plug fitted on the back, also operating handle.

Price	£5 10 0
On Stand No. 68 ...	£7 15 0
On Stand No. 69 ...	£6 11 0

## ACCESSORIES for UNIVERSAL PROJECTORS (1)

Spotting Lenses in Mount.				Lenses for Lantern Slides.			
No. 1	No. 2	No. 3	No. 4	No. 1b	No. 2b	No. 3b	No. 4b
6 in.	8 in.	10 in.	12 in.	8 in.	10 in.	12 in.	14 in.
Focus	Focus	Focus	Focus	Focus	Focus	Focus	Focus
12/6	19/6	22/6	25/-	27/6	35/6	39/6	42/6

### EFFECT SLIDES

Kaleidoscope Effects.  
Sun Rays.  
For Lanterns, 21/-

Scintillating Dots.  
Revolving Colour Dissolver.  
For Universal Projectors, 27/6

Colour Wheel,  
Spindle  
and Clamp,  
23/-

Tinters.  
Consisting of a sheet of non-burnable Gelatine in mahogany frame.  
Price 3/6

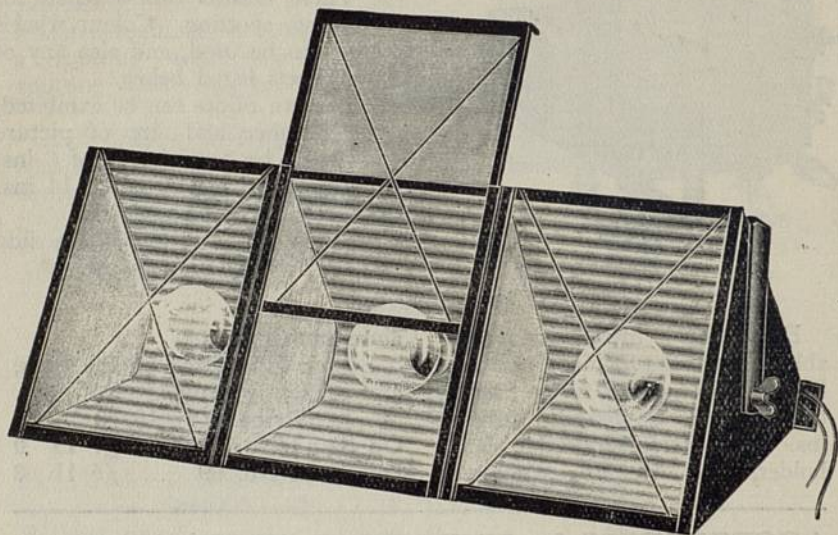
Universal  
Slide  
Carrier,  
4/-



## BATTENS AND FLOODLIGHTS (I)

No. 40.

For the Cinema, Theatre and Shop Window.



Chromium Plated Reflectors, B.C. Porcelain Lampholders, Removable Frames with Colours. Each Compartment measures 8 ins. wide by 10 ins. high in front. Each 3-way length equals 2-ft. with 8 ins. centres.

White enamel inside. Green enamel outside. Removable Back for wiring.

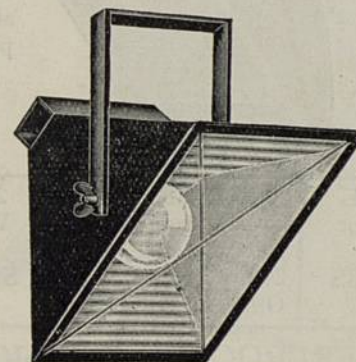
Price £1 17 6 per 3-way (2-ft.)

Any Length can be made up by bolting each section together. Will take 60, 100 or 150 watt Lamps.

## SINGLE UNIT FLOODS (I)

No. 41.

For Theatre, Cinema or Shop Window Lighting Effects.



8 ins. wide. 10 ins. high. Chromium Plated Reflectors. B.C. Porcelain Lampholder. Removable Colour Frame with any desired colour.

White enamel inside. Green enamel outside. Fitted with Stirrup for Hanging or Standing.

Price 15/6

Will take 60, 100 or 150 watt Lamps.

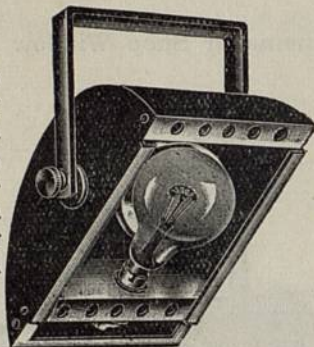


## UNIT FLOODS (I)

No. 65.

The Most Efficient, Economical and Effective Lighting System ever introduced.

Each Flood is enamelled all over and complete with adjustable Stirrup, Lamp Holder, Mangin Mirror, and a Diffusing Glass or glass of any desired colour.



Takes ordinary Gas-filled Lighting Lamps of 100 watt and 200 watt respectively.

100 WATT SIZE  
With 4-inch Mirror  
19/6  
SPARE GLASSES  
1/6

WIRE FRAMES.  
If required  
100 watt size, 2/6  
200 watt size, 3/6  
Other sizes to order.

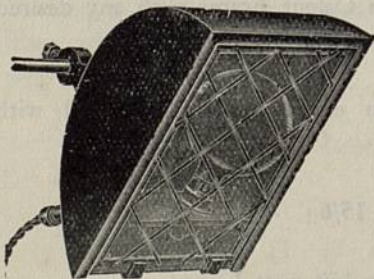
200 WATT SIZE  
With 6-inch Mirror  
27/6  
SPARE GLASSES  
2/-

## WEATHERPROOF FLOODLIGHTS (I)

No. 66.

Specially designed for Ships' Loading and Launching Lights, but may be used for innumerable other purposes.

These Floodlights are made entirely of Heavy Brass with Clamp to affix to 1" Iron Rod. Each Flood is provided with Mangin Mirror, strong Lamp Holder, Cable Gland and Diffusing Glass with Wire Guard.



With 6" Mangin Mirror, for use with ordinary gas-filled Lighting Lamps of 200 watts, for throwing the light alongside or in a downward or upward direction, with an illuminating angle of about 45 deg. and a range of about 200 feet.

Price £4 10 0

Also made for use with 100 watt lamps, fitted with 4" Mirror, etc.  
Price £2 10 0

## THE "CABARET" 500 WATT FLOOD (I)

No. 61.

This Flood is made of sheet steel, fitted with Reflectors, G.E.S Holder, Stirrup for Hanging or Standing, Triple Runners on Front for Colour Screens, Wire Guards, etc.

Price

£2 17 6

Colour Frames 3/-  
Wire Guards 4/-  
Glass Diffuser 4/-



## STAGE LIME BOX (I)

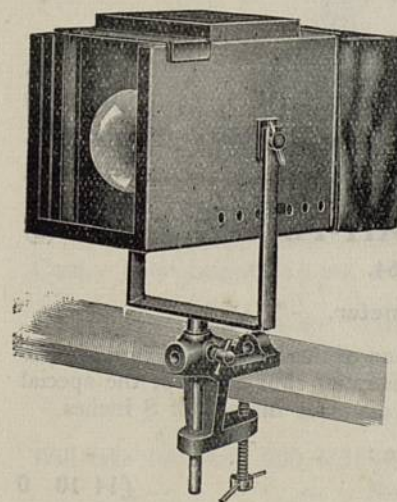
No. 62.

Made of sheet metal, fitted with Iron Stirrup, Handle at back, 6" diameter Condenser mounted in separate carrier, Asbestos Curtain at back, and Runners in front for Colour Frames. Black-out Shield also provided.

Suitable for Arc Lamp No. 113 or No. 114 illustrated on page 69.

Price £3 0 0

Colour Frames ... 3/- each  
Bench Clamp ... 7/6 "





## COMBINED SEARCHLIGHT-FLOODLIGHTS (I)

No. 63.

10" diameter, with Ventilated Top.

These instruments are the latest development for combined searchlight and floodlight work.

Comply with regulations for life saving at sea, and approved by the Board of Trade.

Ideal for illuminating Dock Yards, Buildings, Railway Sidings, for small Trading Vessels to locate Rocks, Harbours, etc.

Suitable for illuminating building, advertisements and numerable other purposes.

They are constructed to stand all weather conditions, made of solid brass, and fitted with Quick Thread Movement, which enables light to be instantly adjusted.

Each body is fitted with special silvered 8" Mangin Mirror, which will not tarnish.

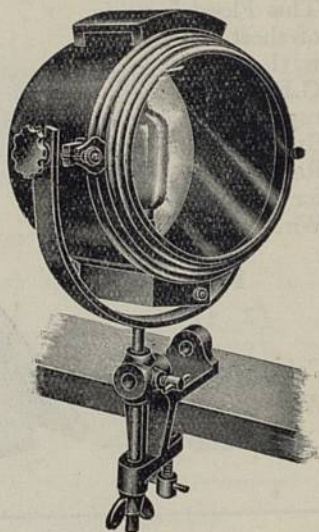


Fig. 1.

### Prices :

As Fig. 1 without Bench Clamp	...	...	...	£6 12 6
As Fig. 1 with Bench Clamp	...	...	...	£6 19 0

*These Searchlights will fit on any other Stand illustrated in this catalogue.*

## COMBINED SEARCHLIGHT-FLOODLIGHTS (I)

No. 64.

14" diameter.

The specification and construction of these Searchlights is similar to the 10" diameter Searchlight illustrated above, except the special silvered mirror which is 12 inches diameter instead of 8 inches.

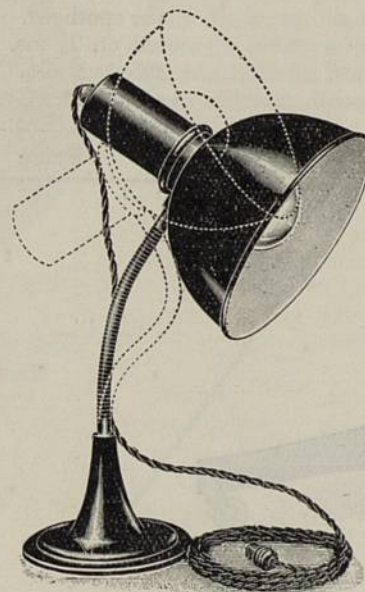
### Price :

Searchlight, complete as specified	...	...	...	£14 10 0
------------------------------------	-----	-----	-----	----------

## FLOODLIGHT (I)

No. 67.

For the Shop Window, Photographic Studio, 16mm. Cinematographers and Inside Illumination.



10½ ins. diameter Reflector, 9 ins. plated Flexible Arm, adjustable E.S. Holder, B.C. Adaptor, 12 ft. Flex, 8 ins. diameter cast iron Case. Total height 21½ ins.

White Enamel inside. Green Enamel outside. Can be tilted in any position.

**Price 32/6**

Will take 100 watt, 200 watt gasfilled or opal Lamps, and 500 watt Nitrophot.

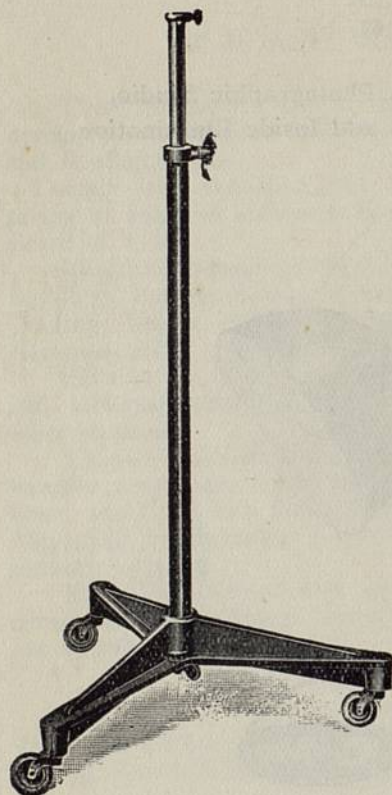


## SPOTLIGHT STANDS (I)

No. 68.

Adjustable Stand, on very substantial base, made of cast iron, fitted with telescopic steel tubes, which can be adjusted from 3ft. 6ins. to 6ft. Fitted with clamping nuts for holding the spotlight. The whole mounted on  $2\frac{1}{4}$  ins. diameter rubber-tyred castors. The Stand finished in Blue, Grey, Brown, Green or Black Enamel.

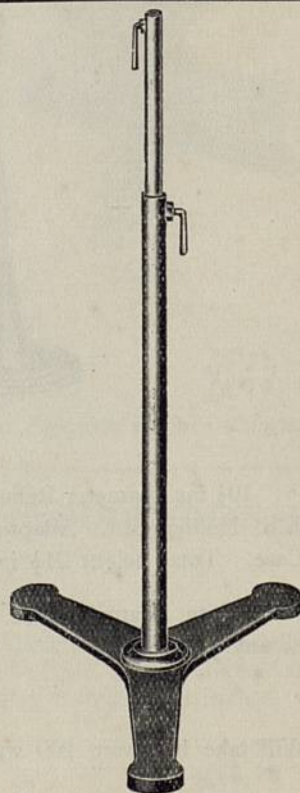
Price £2 5 0



No. 69.

Adjustable Stand, on cast iron base, fitted with telescopic tubes and clamping screws. Finished in Blue, Grey, Brown, Green or Black Enamel as required.

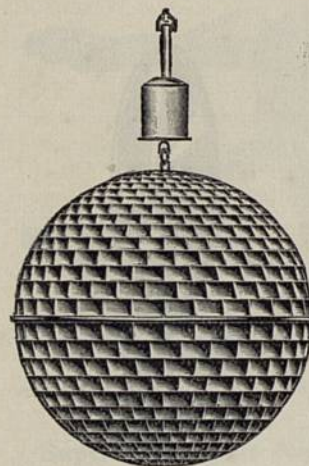
Price £1 1 0



## MIRROR BALL (I)

No. 141.

This Ball is similar in construction to those on page 51, but is smaller in diameter. Specially for use in small halls or rooms where the ceiling is low. The ideal size for Road-House Dance Rooms.



12" diameter.

Complete Ball with Self Reversible Clockwork Motor.

Price :

£4 5 0

## LIGHT SPOTLIGHT STAND

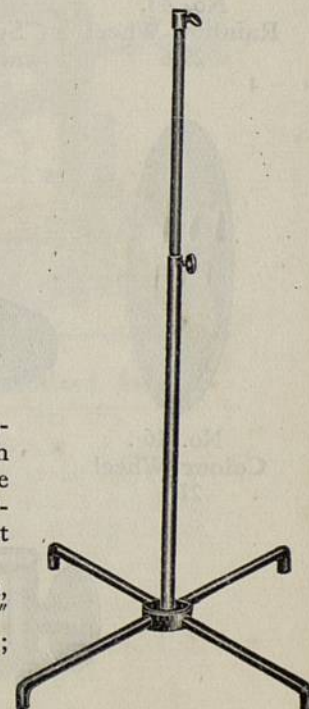
No. 142

A very light stand constructed of steel tube with detachable feet and centre tubes, for transport purposes. Will carry light Floods or Spotlights.

Finished in blue, brown, green, grey or black enamel. Takes  $\frac{3}{8}$ " spindle. Height : Min., 3' 6"; Max., 6' 0".

Price 10/6

Can be supplied to carry two or three Floods.





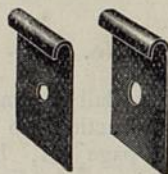
## SPOTLIGHT ACCESSORIES (I)



No. 43.  
Rainbow Wheel  
27/6



No. 46.  
Colour Wheel  
21/-



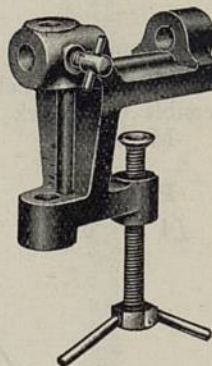
No. 44.  
Spotting Attachment  
and Four Diaphragms,  
£2 2 0



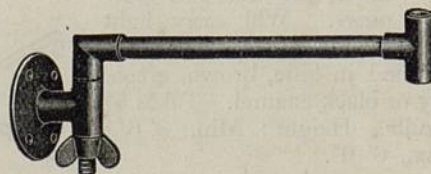
No. 47.  
6" Table Stand,  
5/9



No. 48.  
Flicker Wheel  
19/6

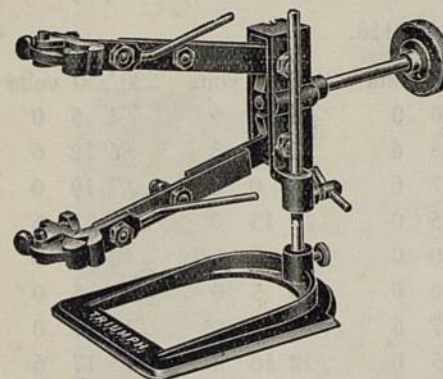


No. 48.  
Bench Clamp  
7/6



No. 49.  
Wall Bracket, 7/6

## ARC LAMPS (I)



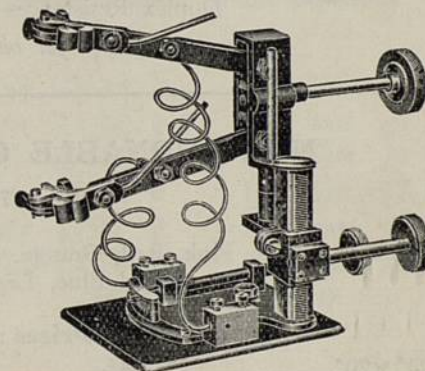
Superior Scissors Arc.  
No. 113.  
For A.C. or D.C.  
Suitable for 10 to 20 amps.

Prices :  
Arc Lamp on Tray £2 5 0  
Arc Lamp only ... £2 1 6

Superior Scissors Arc.  
No. 114.

Similar to No. 113 but on Mechanical Tray with horizontal and vertical adjustments, arc leads and terminal blocks.

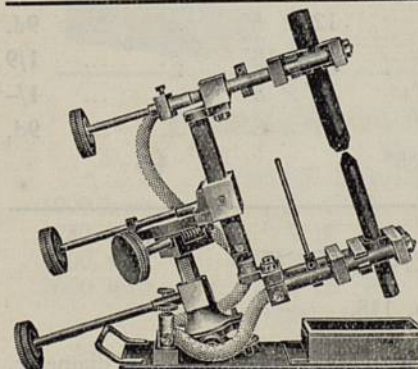
Price :  
Arc Lamp on Tray £3 10 0



Standard Arc.  
No. 115.

For A.C. or D.C.  
10 to 50 amps.  
Fitted with 4 Adjusting  
Handles, Tilting Device,  
Arc Leads, etc.

Price £5 15 0  
Please state whether A.C. or  
D.C.



Shop Soiled 80 amp Arc Lamps ... ... Price £3 0 0



## ARC REGULATING RESISTANCES (N)

No. 116.

Amps.	60/80 volts	100/110 volts	200/220 volts	230/250 volts
5-15	£2 14 6	£3 10 0	£5 0 0	£4 5 0
5-20	£3 2 6	£3 18 6	£6 5 0	£6 12 6
10-30	£3 10 0	£4 7 6	£7 0 0	£7 10 0
10-40	£3 15 0	£4 15 0	£7 15 0	£8 17 6
20-50	£3 18 6	£5 0 0	£9 7 6	£10 0 0
20-60	£4 5 0	£5 10 0	£10 5 0	£11 5 0
30-70	£4 7 6	£5 17 6	£10 17 6	£12 10 0
30-80	£4 15 0	£6 5 0	£12 10 0	£13 17 6

Duplex Resistances—plus 100%

Other sizes quoted for on receipt of details.

## NON-BURNABLE GELATINE (I)

No. 117.

Colours :—Matt, Pink, Red, Orange, Yellow, Green, Amber, Violet, Royal Blue, Light Blue.

Prices :

24" × 20"	...	...	4/-	12" × 10"	...	...	1/3
24" × 10"	...	...	2/3	12" × 5"	...	...	9d.
20" × 16"	...	...	3/3	10" × 16"	...	...	1/9
20" × 12"	...	...	2/3	10" × 8"	...	...	1/-
20" × 6"	...	...	1/3	10" × 6"	...	...	9d.

Set of 8 Colours, 6" × 5" ... 4/6

## IRIS DIAPHRAGMS (I)

No. 118.

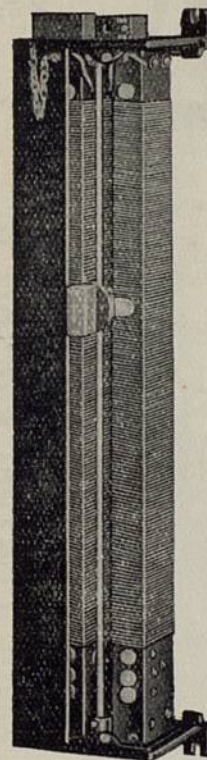
We can supply Iris Diaphragms with apertures  $\frac{1}{2}$ " up to 4" diameter.

Prices on application.

## DIMMERS (I)

No. 123.

Sliding Type.



These Dimmers comprise graduated windings of nickel copper resistance wire on best quality slates, mounted between cast iron end plates with compressed micanite insulation.

The windings are carefully calculated to ensure an even flickerless variation from "full on" to "black" with the provision of a "quick break" to off position.

Prices :

100 watt	£1 10 0	750 watt	£2 10 0
200 watt	£1 10 0	1000 watt	£3 0 0
300 watt	£1 15 0	1250 watt	£3 10 0
400 watt	£1 15 0	1500 watt	£3 12 6
500 watt	£1 15 0	2000 watt	£5 0 0
600 watt	£2 0 0	2500 watt	£6 0 0
		3000 watt	£6 10 0

## TUBULAR TYPE DIMMERS (I)

No. 124.

(Worm Driven by Handwheel).

1000 watt	...	£5 0 0	2500 watt	...	£8 5 0
1250 watt	...	£5 10 0	3000 watt	...	£9 0 0
1500 watt	...	£6 0 0	4000 watt	...	£15 0 0
2000 watt	...	£7 10 0	5000 watt	...	£16 5 0
		6000 watt	...	£18 0 0	

Any other sizes made to order.

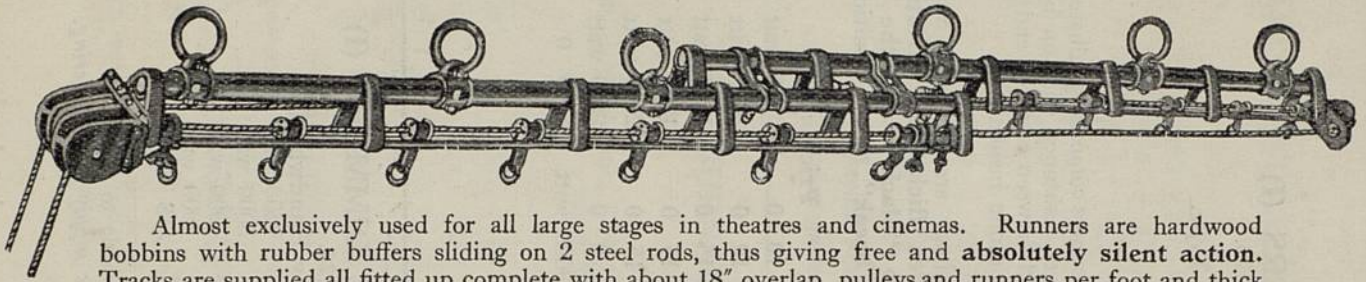
Please state voltage of electric supply when ordering.



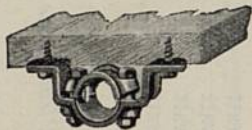
## STAGE CURTAIN RAILWAY (M)

No. 131.

A Popular Track for Stage Curtains in Large Theatres.

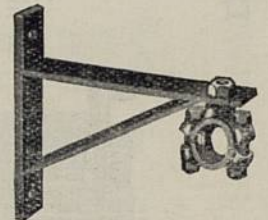


Almost exclusively used for all large stages in theatres and cinemas. Runners are hardwood bobbins with rubber buffers sliding on 2 steel rods, thus giving free and **absolutely silent action**. Tracks are supplied all fitted up complete with about 18" overlap, pulleys and runners per foot and thick sash line if for hand working or flexible steel wire if used with hand-drum on electric control. The track is made in different qualities according to length required.



No. 132  
Face Fixing  
Bracket.

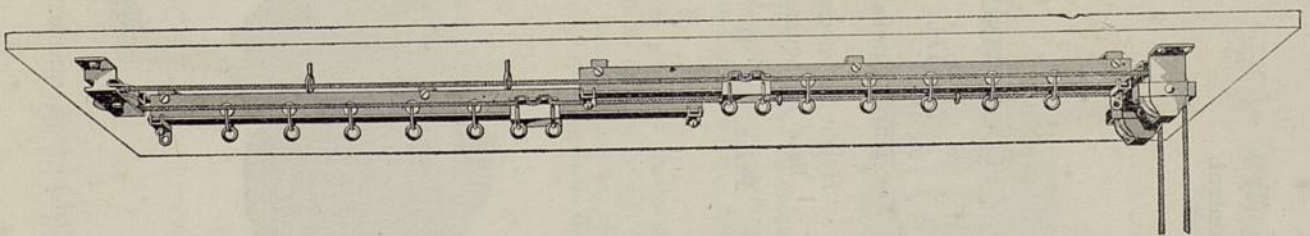
Prices quoted on receipt of details, namely: width of opening and whether face or top fixing brackets required.



No. 133  
Top Fixing  
Bracket.

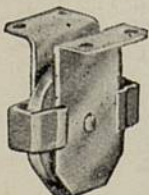
## STAGE CURTAIN RAILWAY (I)

No. 134.

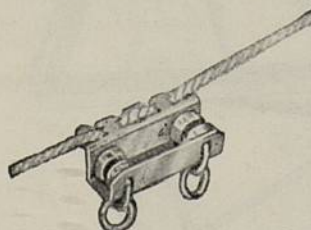


Suitable for Heavy Curtains in Hotels, Colleges, Public Buildings, and Small Stages. Only for top fixing or screwed to a board as illustrated; this enables the pulleys to bear a heavy strain which could not be obtained with a face fixing attachment. The pulleys are fitted with extra large wheels and the improved Four Roller Master Runner ensures perfect free movement.

Brass Rail, with Runners, Brackets, Stops and Screw Eyes to carry cord ... 1/10 per foot



Set of Pulleys  
and Master  
Runners  
complete  
3/4 per set



Special  
Best Braided  
Cord  
2/8 per 12 yards

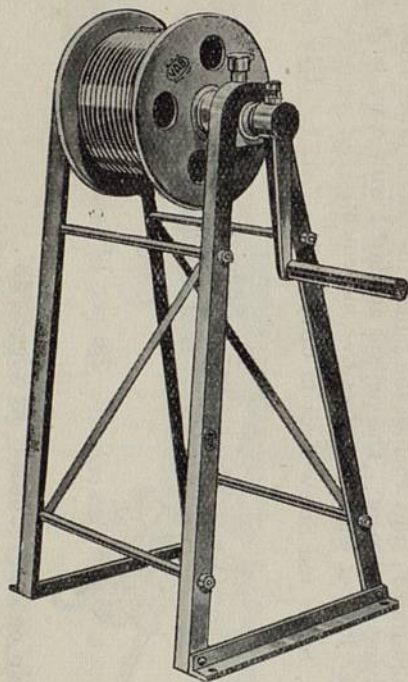


For Overlap on Stage Curtains we suggest 18".



## WINCHES (I)

For Curtain Control.



### FLOOR WINCH

No. 174.

For Hand Operation.

Height 36" overall.  
Base 14" square.

Price £4 10 0

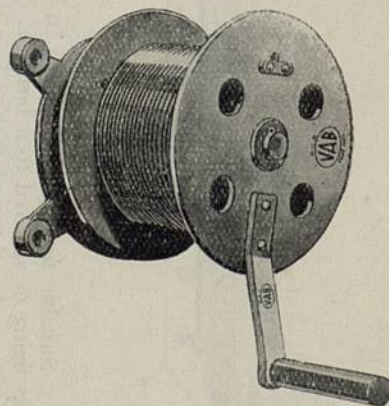
### WALL WINCH.

No. 175.

For Hand Operation.

Drum  $8\frac{1}{4}$ " diameter.  
Drum 4" wide.

Price £3 14 0



Electrical Curtain Controls supplied to requirements.

## SHOP WINDOW SIGNS (I)

No. 119.



These signs, when illuminated at night, also flood your shop window with light, thus serving a double purpose, and also helps to reduce your electric light consumption.

They are strongly made of sheet metal, fitted with porcelain B.C. Holders to take 60 or 100 watt lamps. Fitted with Side Straps for hanging, Red Flamlite Stippled Glass, or other colour if required, Enamel inside, Green or Gold Enamel Outside.

Made in 3 lengths 12", 18" and 24" long, 7" high, 6" deep.

Size A takes Five 4" x 2" letters or Six 3" x 1½" letters.

„ B „	Eight „	„ „	Ten „	„ „
„ C „	Eleven „	„ „	Fourteen „	„ „

### Prices :

				Complete as specified.	
				Green Enamel	Gold Enamel
A.	12"	...	...	£1 2 6	£1 5 0
B.	18"	...	...	£1 10 0	£1 12 6
C.	24"	...	...	£1 17 6	£1 19 6

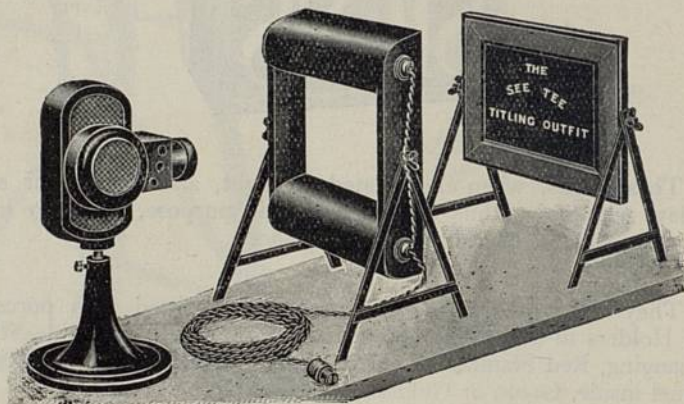
Other sizes made to order.



## 16m.m. TITLE OUTFIT No. 32 (C)

No. 32.

This is the simplest Titling Outfit on the market, comprising three separate units: Camera Stand, Lighting Unit and Easel Board. In conjunction with the Easel Board, Magnetic Letters are used, although they are a little more expensive, for simplicity and speed cannot be beaten, and they will stay on irrespective of the angle of the board.



"A"

"B"

"C"

"A"

**Camera Stand**, made of cast iron, 8" diameter base, with adjustable spindle flange for fixing camera. The whole green enamelled.

Price 8/6

"B"

**Lighting Unit**, with 12-ft. flex, B.C. Adaptor, 4 B.C. Lamp-holders, white enamel inside, green enamel outside, on stand as illustrated.

Price 27/6

"C"

**Title Board**, oak frame 13×10" with metal back 10×7", complete on green enamelled stand.

Price 13/6

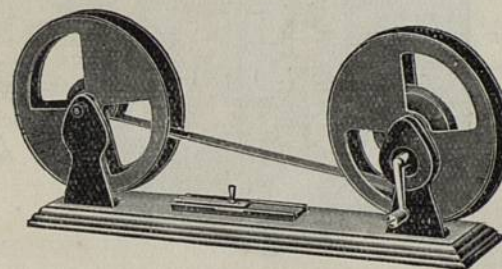
## MAGNETIC LETTERS (I)

Fount of 120 × 1/2" letters in Steel Lined Box	...	...	£2 16 3
" 30 × 1/2" figures	"	"	14 9
" 120 × 3/4" letters	"	"	£3 11 3

Extra letters and figures can be supplied in quantities of not less than one dozen.

## 16mm. FILM REWINDER No. 33 (C)

No. 33.



These Rewinders are well made, gear-driven, mounted on oak base board, to take 16mm. spools. By using rewriter with both heads geared, the film can be wound in either direction.

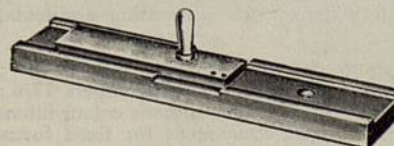
Prices :

A. With One Geared and One Non-geared Head	...	£1 0 0
B. With Both Geared Heads	...	£1 5 0

(Film Splicer extra if required).

## 16mm. FILM SPLICER No. 34 (C)

No. 34.



Plated Film Splicer	...	4/6
Film Scraper	...	1/-
Cement and Brush	...	1/3



## "DEKKO" 9.5mm. CINE CAMERA (C)

Fitted with  
Dallmeyer  
f/3.5—20mm.  
Fixed focus  
Lens  
£6 6 0

Fitted with  
Taylor Hobson  
f/2.5—23mm.  
Fixed focus  
Lens  
£7 17 6



Fitted with  
Dallmeyer  
f/1.9—1"  
Micrometer  
focussing Lens  
£8 18 6

Fitted with  
Ross  
f/1.9—1"  
Micrometer  
focussing Lens  
£9 18 6

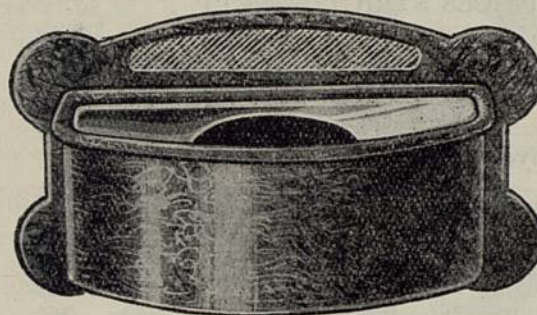
### Specification :

- MOTOR :** Precision made high speed clockwork fitted with extra powerful spring to run through 30 ft. film at one winding and good power reserve.
- SPEEDS :** Variable from half speed to normal 16, and up to REAL slow motion of approximately 64 per second, by means of new patented speed regulator.
- STARTING :** Can be set for short shots or continuous running for self-portraits. Also single pictures for tricks or animation.
- VIEWFINDER :** Brilliant optical View Finder of large size, built inside the Camera, very close to Lens to give true reading.
- LOADING :** By means of single movement gate with sensitive pressure pad.
- LENSES :** Dallmeyer Lenses with standard interchangeable screw mount for Lenses or Telephoto Lenses of any focus.
- CASE :** Special wear-resisting Bakelite of patented design—standard colour black, bushed for tripod.
- FILM :** Takes standard Pathe 9.5m/m daylight chargers.
- FITTINGS :** All outside fittings and the film gate chromium plated. Strong leather handle and safety door catch preventing accidental opening.
- ACCESSORIES :** Dallmeyer Telephoto Focussing 3" F/4 £5 5 0 ; Leather case to take camera, filters and spare chargers 17/6 ; Telephoto Leather case £1 1 0 ; Panchromatic colour filters 2x, 3x, 4x, 10/6 each ; Portrait attachment for fixed focus lenses 10/6 ; Lens hoods 1.9, 2/6 ; ditto 3.5, 2/-.

## MARBELITE ASH TRAYS (N)

In Assorted Colours.

No. 120.



### "ELITE" ASH TRAY.

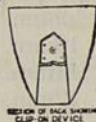
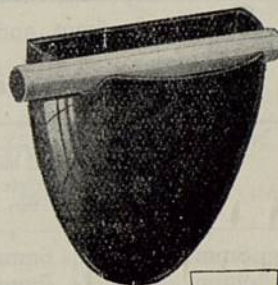
Metal Tray Inset  
for Cigarettes.  
Back Panel for  
Striking Matches.  
24/- per dozen

### DASHBOARD ASH TRAY

No. 1357.

With clip-on device at back.

6/- per dozen.

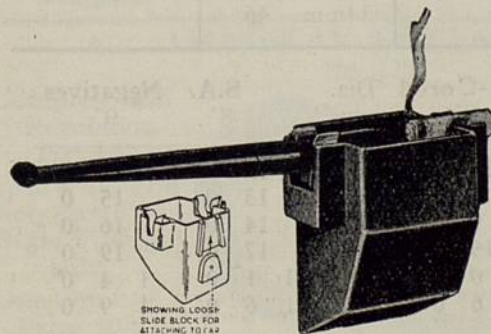


### SAFEGUARD ASH TRAY.

No. 1358.

With clips for cigarette  
and pipe, and clip-on  
device at back.  
(Reg. Design No. 788705)

12/- per dozen.





## CARBONS

All prices are per 100 pieces, except where otherwise stated.  
Minimum quantity supplied, packets of 25.

ALL PRICES STRICTLY NETT.

### PENCIL AND STAGE ARC CARBONS.

Length 6 inches.

Solid Negatives				Cored Positives			
5mm.	11/6	11mm.	25/-	5mm.	12/6	11mm.	28/-
6mm.	12/6	12mm.	26/-	6mm.	13/6	12mm.	30/-
7mm.	15/6	13mm.	28/6	7mm.	17/6	13mm.	32/-
8mm.	18/-	14mm.	30/-	8mm.	20/-	14mm.	34/-
10mm.	22/6	16mm.	35/-	10mm.	27/-	16mm.	36/-

5mm. and 6mm. cored, 8" long, 17/6

### SHIP SPECIAL MIRROR CARBONS.

No. 24 Positive. Cored. 9in. long.	No. 25 Negative. Inlaid hard copper- coated core. 9in. long.	No. 24 Positive. Cored. 8in. long.	No. 25 Negative. Inlaid hard copper- coated core. 8in. long.
8mm. 19/-	6mm. 15/-	8mm. 17/-	6mm. 13/-
9mm. 24/-	7mm. 16/-	9mm. 21/-	7mm. 14/-
10mm. 29/-	8mm. 19/-	10mm. 26/-	8mm. 17/-
11mm. 35/-	9mm. 24/-	11mm. 31/-	9mm. 21/-
12mm. 40/-	10mm. 29/-	12mm. 36/-	10mm. 26/-
13mm. 46/-	11mm. 35/-	13mm. 41/-	11mm. 31/-
14mm. 52/-		14mm. 46/-	

Dia. mm.	S.A. Positives—Cored		Dia. mm.	S.A. Negatives	
	8"	9"		8"	9"
8	17 0	19 0	5	12 6	14 6
9	1 1 0	1 4 0	6	13 0	15 0
10	1 6 0	1 9 0	7	14 0	16 0
11	1 11 0	1 15 0	8	17 0	19 0
12	1 16 0	2 0 0	9	1 1 0	1 4 0
13	2 1 0	2 6 0	10	1 6 0	1 9 0

## SPOOLS (I)

Best quality japanned, with rolled edge, stamped out of sheet metal,  
with wood core and brass centre.

Ordinary  
Spools.  
For  $\frac{3}{8}$ " or  $\frac{1}{2}$ "  
Spindles.

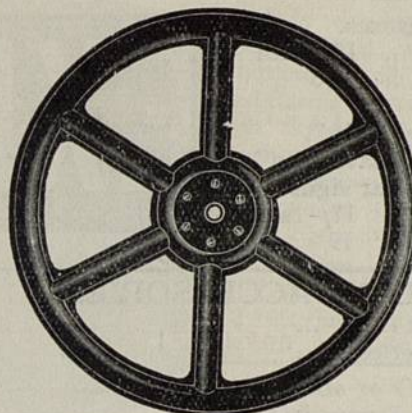
	Each
10" diam.	4/-
12" "	4/6
12½" "	5/-

With Key-Way  
Fitting.

	Each
10" diam.	5/-
12" "	4/6
13½" "	6/-

Special Split  
Spools.

	Each
10" diam.	5/6
12" "	6/-
13½" "	6/6



With Key-Way  
Fitting.

	Each
10" diam.	6/6
12" "	7/-
13½" "	7/6

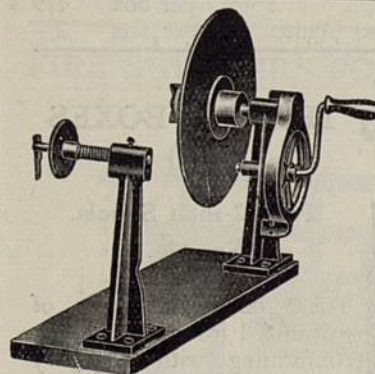
## SUPERIOR QUALITY GEAR TYPE REWINDER (I)

No. 121.

For re-winding spools; with slip  
check to remove films from spools.

Complete on Polished Baseboard.

Price £2 15 0

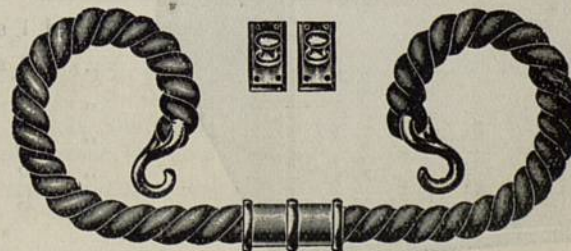


## GANGWAY ROPES, &c. (N) No. 122.

Complete with  
Regulation  
Fittings.

Up to 3' 6" 17/6  
Every extra 6" 1/-  
Brass Fittings  
only.

Complete Sets.  
Price 10/6





## ILLUMINATED SIGNS (I)

No. 125.

Suitable for lighting with Electricity, Gas, or Oil.  
Stencil-cut Letters and Sliding Fronts.

### "Exit" Boxes.

Without glass ... 15/6 each  
With glass ... 17/6 "

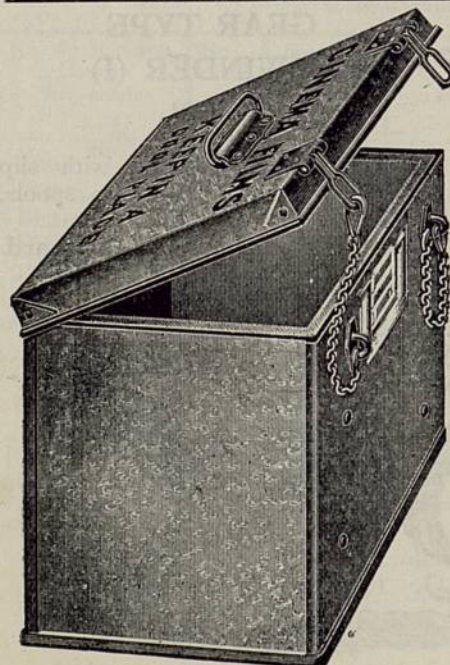
"Emergency Exit",  
"Cloak Room," "Lavatory."  
and other special signs.

Without glass ... 17/- each  
With glass ... 19/- "



## SLIDE ACCESSORIES (I)

Slide Writing Ink ...	...	...	...	1/3
Slide Masks (Assorted) ...	...	...	per box	2/-
Slide Binders ...	...	...	per box	2/-
Slide Black ...	...	...	...	1/3
Slides (Opaque), "Specialist" Black ...	...	...	per box	1/9
Slides (Opaque), "Specialist" Black and White ...	...	...	per box	2/-



## TRANSIT BOXES (M)

For 12-inch Spools.  
No. 126.

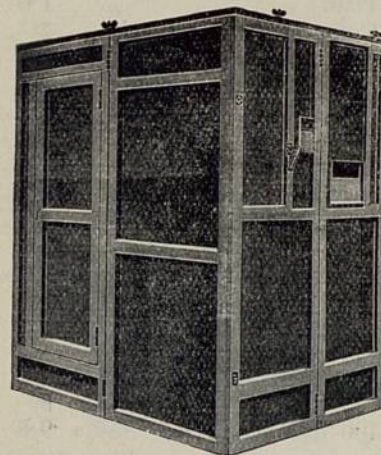
These boxes are made of galvanized iron, wood lined, conforming with necessary regulations.

### Prices :

To hold 1 spool	12/- each
" 2 spools	13/- each
" 3 "	14/- "
" 4 "	15/- "
" 5 "	17/- "
" 6 "	19/- "

## OPERATING HOUSES (M)

No. 127.



Made with best galvanized steel sheets, fitted with metal Drop Shutters and all Fittings for opening and closing from inside and outside, also fitted with ventilator over machine, strong wood frames.

Size	Height	Length	Width	Price £ s. d.		
1	6ft. 6ins.	5ft.	5ft.	13	17	6
2	7ft.	5ft.	5ft.	15	0	0
3	6ft. 6ins.	6ft.	6ft.	17	0	0
4	7ft.	6ft.	6ft.	19	0	0

Made to Order only.  
Delivery 7 to 10 days.

## FIRE SHUTTERS FOR OPERATING ROOM (N)

No. 128.

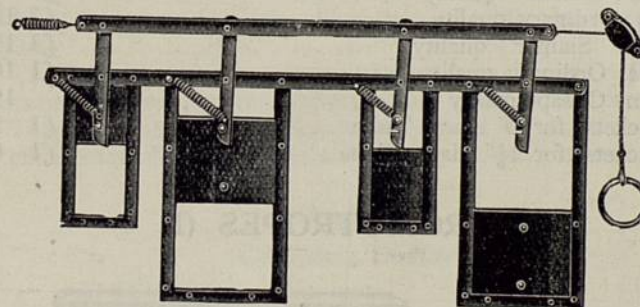


Illustration shows a 4-hole Shutter for 2 Projectors.

2-hole Shutter ...	£3 15 0	3-hole Shutter ...	£5 10 0
4-hole Shutter ...	£7 0 0	5-hole Shutter ...	£8 17 6
6-hole Shutter ...	£10 17 6		

Smoke proof Window Frames ... 18/6

When ordering, a sketch should be sent giving measurements and position of each shutter.



## FILM CEMENT (I)

### Ordinary and Non-Flam.

Complete with Brush.

1 oz. Bottle	...	1/3 each
2 oz. Bottle	...	2/- "

## LACQUER (N)

### Specially Prepared Lacquer.

For colouring Lamps.

In ½-pint bottles.

Any Colour, 3/9 per bottle.

## ARC LEADS (I)

### Asbestos Covered.

30/100 amps.

(soldered and bound).

5/6 per pair

5/6 per yard

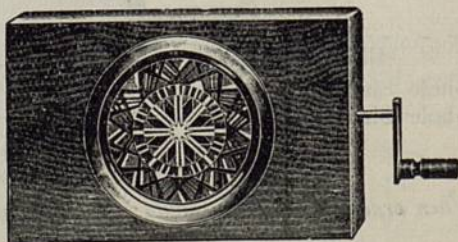
## CINEMATOGRAPH LENSES AND JACKETS (I)

2" diam. "Siamor" quality	...	...	...	£4 10 0
2" diam. Ordinary quality	...	...	...	£2 10 0
1½" diam. "Siamor" quality	...	...	...	£3 15 0
1½" diam. Ordinary quality	...	...	...	£1 10 0
1½" diam. Cheap quality	...	...	...	15 0
Rack Jackets, for 2" diam. Tube	...	...	...	£1 5 0
Rack Jackets, for 1½" diam. Tube	...	...	...	£1 0 0

## CHROMOTROPES (I)

Best Quality, 3 ins. diam.  
in a variety of patterns  
mounted in Mahogany  
Frame, 7×4½ ins.

Price 21/- each



## "H.M. KING"

### Glass.

Plain	...	...	1/6
Coloured	...	...	2/-

### Indestructible.

Plain	...	...	3/3
Coloured	...	...	4/-

## ASBESTOS BLANKETS (I)

Made to any size required

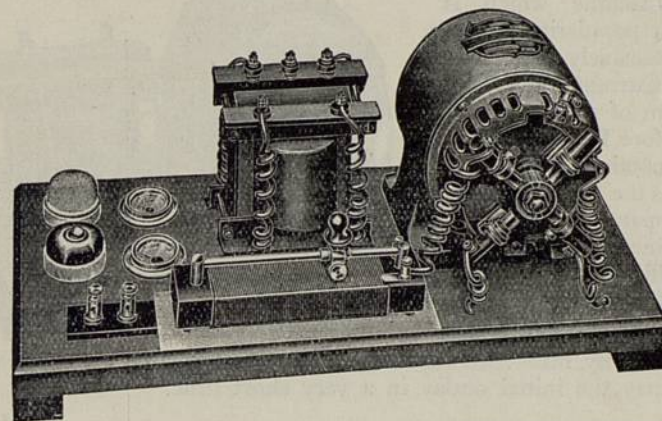
Per square foot, 1/6

## FILM SPACING (I)

50 feet	...	...	5/-
100 feet	...	...	9/6

## COMMUTATING RECTIFIERS (B)

No. 129.



### Combined Rectifier and Switchboard.

Rectifier, mounted complete on switchboard, with Transformer, Central Zero Ammeter and Voltmeter, Battery Terminals, Switch and Fuse, Regulating Resistance, Flex Lead and Plug.

As will be seen from the illustration, the machine is small and compact.

The Commutator is readily accessible for cleaning and replacement of brushes, an essential item where rotary plant is concerned.

This machine has been specially designed for battery charging and efficiencies of approximately 90 per cent. are obtained.

### Prices :

#### Complete Outfit.

No. A.	Output 25 volts, 5 amps.	...	...	£13 10 0
No. B.	" 50 " 5 "	...	...	£14 0 0
If separate Switchboard required (extra)				£1 10 0

N.B.—Above prices are for Rectifiers to be used on any normal Voltage (Single Phase), 100 to 250 Volts, 50/100 Cycles.

For 40 Cycles, 10 per cent. extra ; 25 Cycles, 25 per cent. extra.

When ordering please state Voltage and periodicity of supply and whether 25 Volt or 50 Volt output is required.



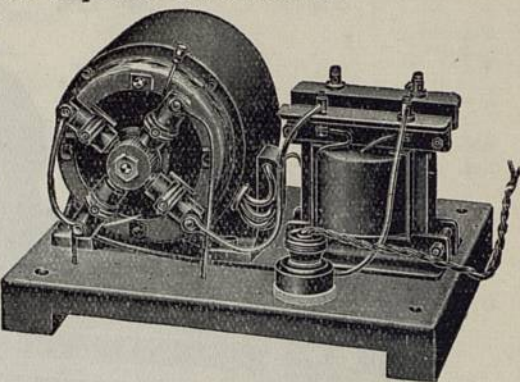
## COMMUTATING RECTIFIERS (N)

No. 130. With Separate Switchboard.

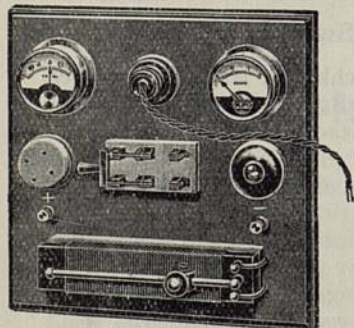
**Rectifier.**—A thoroughly reliable machine which is gaining in popularity and is in use extensively where Alternating Current is supplied. Some form of rectifier is essential before Direct Current can be obtained, and this machine is the latest development in apparatus of this kind.

This Rectifier has a far greater efficiency than most types of Rectifiers, and maintenance costs are negligible.

A sturdy little machine that will give satisfaction in every way, and repay the initial outlay in a very short time.



**Switchboard.**—For the control of the Rectifier, a Switchboard is supplied, upon which is mounted a Central Zero reading Voltmeter and an Ammeter; also a variable Resistance for regulating the output. Other instruments fitted on the board include a Change-over Switch for changing Polarity, a Fuse Box, Tumbler Switch and Plug Socket, including 2-pin Plug.



### COMPLETE OUTFIT.

**Rectifier.**—Mounted on wood base, complete with Transformer and 2-pin plug and flexible cord for connecting direct to Switchboard.

**Switchboard.**—Central Zero Voltmeter, Ammeter, Double Pole Change-over Switch, Regulating Resistance, 2-pin Plug and Socket, Porcelain Fuse, Tumbler Switch, Terminals (for Mains), etc., etc. Wired and ready for use.

#### Prices :

No. A.	Output 50 volts, 10 amps.	...	...	...	£19 10 0
No. B.	" 50 " 15 "	...	...	...	£21 10 0

N.B.—Above prices are for Rectifiers to be used on any normal Voltage (Single Phase), 100 to 250 Volts, 50/100 Cycles.

For 40 Cycles, 10 per cent. extra; 25 Cycles, 25 per cent. extra.

When ordering please state Voltage and periodicity of supply and whether 25 Volt or 50 Volt output is required.

## NOTES



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W.D. (CF)  
C36/824