

Telephone: 1964 HOP.

Telegrams: "BIOJECTOR," LONDON.

C

SECTION.



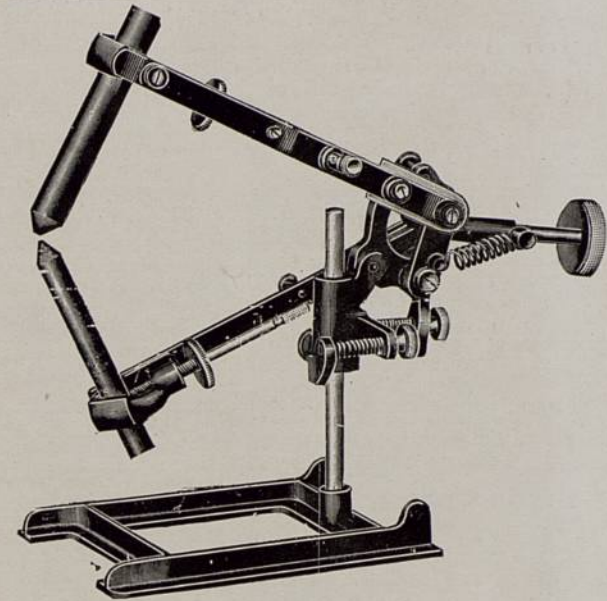
THE BEARD BRAND.

R. R. BEARD,  
10 TRAFALGAR ROAD,  
OLD KENT ROAD,  
LONDON, S.E.

ESTD. 1886.



THE  
IDEAL ARC LAMP.



**T**HIS unique design for an inexpensive  
**Hand Feed Arc Lamp**

is perhaps the best yet introduced where a carrying capacity not exceeding 30 amperes is required.

It is fitted with all mechanical movements for centring, viz., raising, tilting, and lateral; both carbon arms are adjustable.

It is very simple, and yet very substantial in its construction.

It is equally suited for use with

**Alternating or Direct Current.**

For use in conjunction with Optical Lantern, or stage effect lighting, it is an ideal lamp.

**Price complete,**  
Mounted on a malleable iron tray,

**£1 · 15 · 0**

R. R. BEARD,

10, TRAFALGAR ROAD,  
OLD KENT ROAD, S.E.



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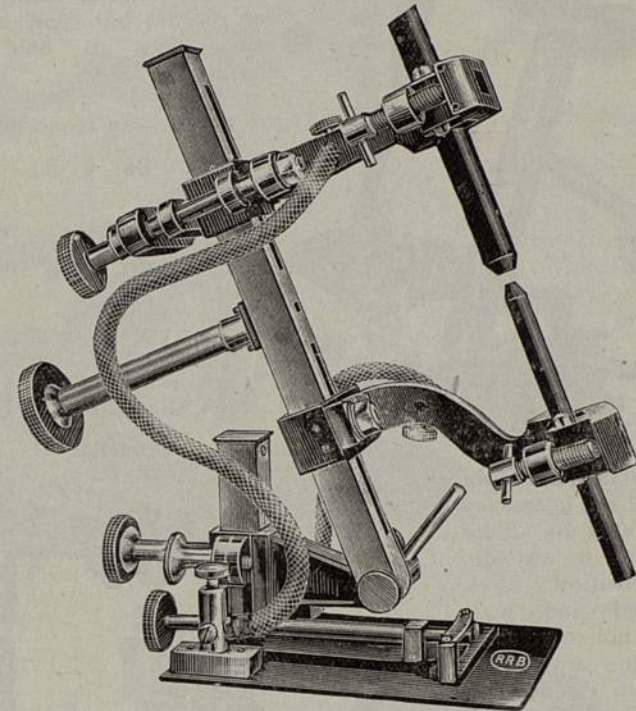
BEARD'S  
IMPROVED

# HAND=FEED ARC LAMPS.

New Pattern Square Tube.

MODEL A.

For Cinematograph and Optical Lantern Projection.



Made in Various Sizes.

The introduction of the **Square Tube Arc Lamp** is owing to the experience of many workers with the round tube lamp complaining of the wear of the sockets, which soon cause the carbon holders to oscillate and put them out of line. To obviate this and maintain the truth of the carbon, the square tube pattern has been produced; the wear and tear takes place only upon the edges of the tube, which will appeal and be plain to all users and operators as a better system, and ensuring rigidity and truth of the working parts.

The Carbon holders are of special construction, and, being fitted with a single screw clamp, give greater facility for removing and renewing the Carbons.

The Lamp is fitted with a swing joint and clamping screw for setting the Lamp at any desired angle.

- |        |  |        |
|--------|--|--------|
| No. 1. | Fitted with Top Adjustment for Carbons for 10 to 25 amps. ... ..                     | £3 3s. |
| No. 2. | Fitted with Top Adjustment for Carbons and special Holder, for 15 to 60 amps. ... .. | £4 4s. |
| No. 3. | Do. do. heavy pattern, for 25 to 120 amps.   | £5 5s. |

W.D.  
8°  
219  
BR



## ARC LAMPS.

### MODEL B.

Same design as Model A, but the carbon clamps are of the flat bar type, having two nuts to hold the carbons.

No. 2. 15 to 60 amps.,  
£4 4 0

No. 3. 25 to 120 amps.,  
£5 5 0

## ARC LAMPS.

### MODEL U.

A practical arc lamp with all the necessary movements to adjust the lamp to any desired position. Well insulated and warranted not to stick or bind in any way. With an easiness of manipulation which the professional demands.

It has mechanical motions for raising and lowering, lateral movements, rack adjustment for carbon feed, and screw motion to top carbon for alignment of arc.

All pinions are cut from solid steel bar and the gearing racks, etc., are machine cut and guaranteed accurate.

They are extremely heavy and the general finish excellent.

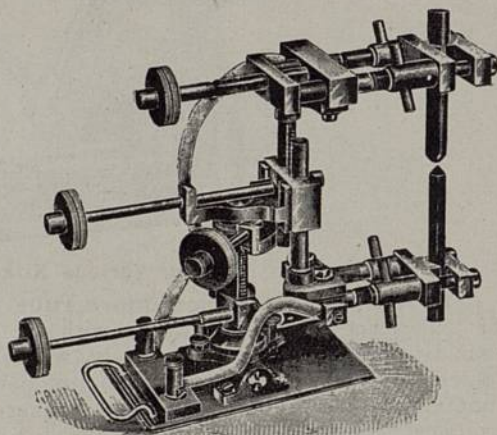
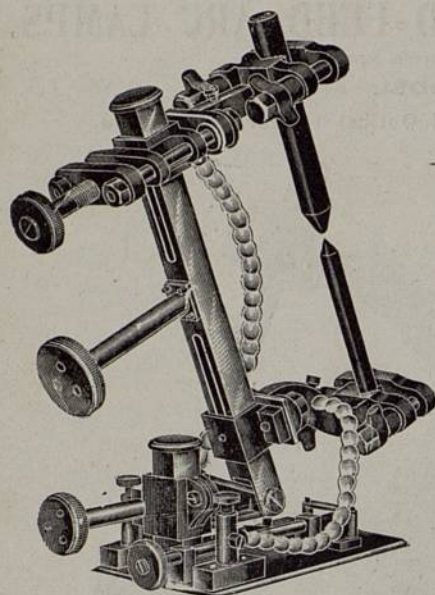
Price, No. 1 will carry 50 amps. ... £4 0 0

„ No. 2, heavy pattern, will carry 100 amps. 5 15 0

Asbestos-Covered Leads for Arc Lamps, per pair 0 4 0

Extra carbon holders ... per pair 0 7 6

If required, any model can be supplied with carbon clamps to hold the carbons at an angle of 30° for use with alternating current **without extra charge.**

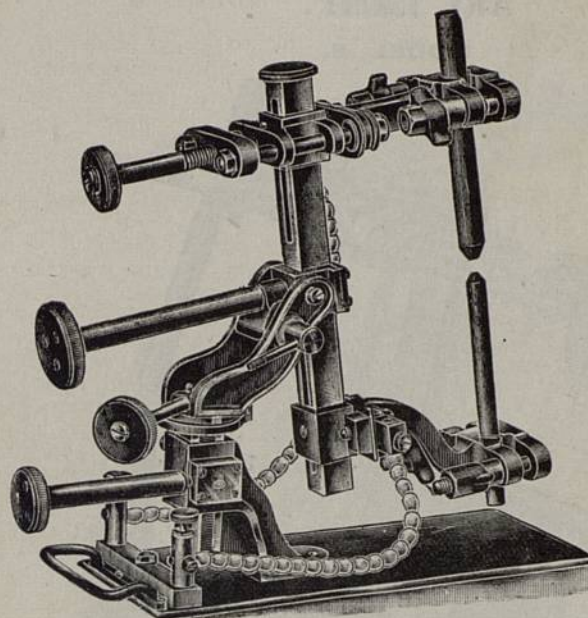


## ARC LAMPS.

### MODEL C.

Made to carry up to 120 amps., and has every mechanical movement and adjustment for optical centring. Most suitable for heavy & rough use.

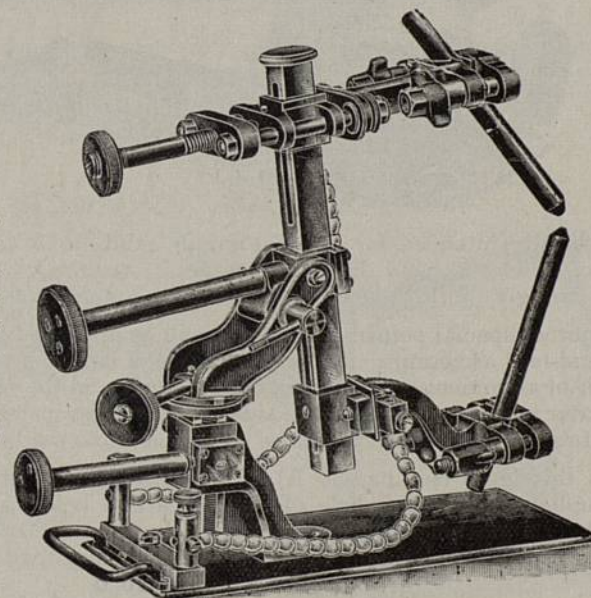
Price, £6 0 0



### MODEL D.

This lamp is the same design as above but fitted with arms for use with the carbons at a V

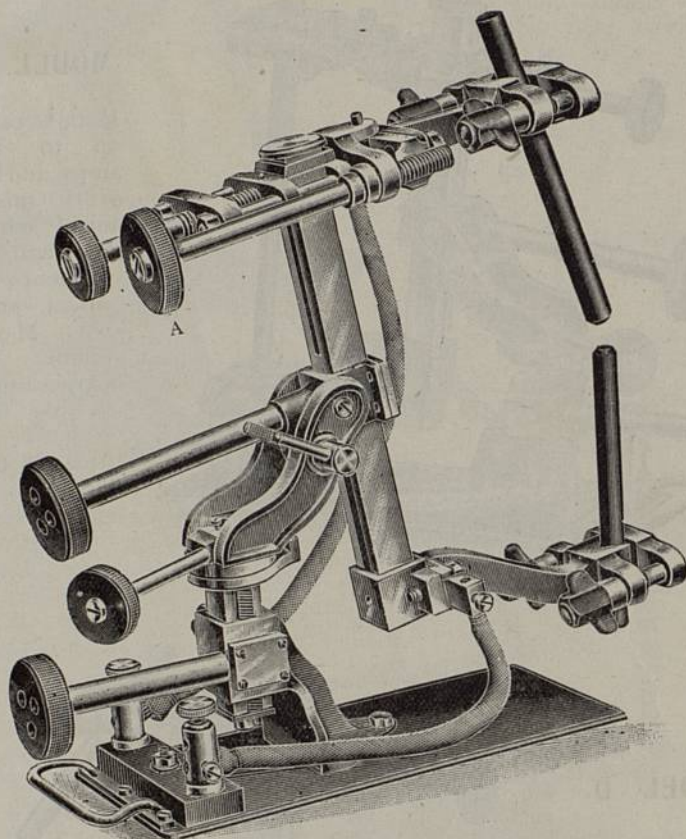
Price, £6 0 0





## BEARD'S IMPROVED HAND-FEED ARC LAMP.

MODEL E.



Specially intended for cinematograph exhibitions in public halls, etc., where a very high amperage is required. This lamp is strongly built, so as to stand any amount of hard wear.

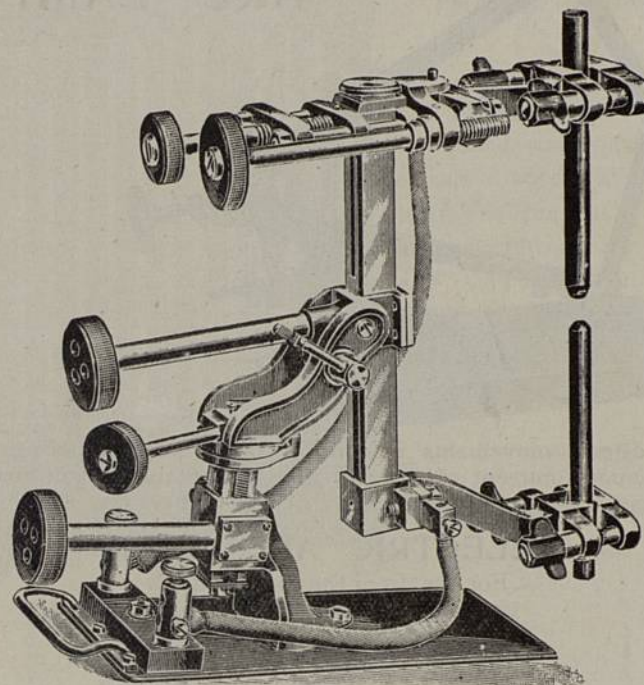
Another special point is one which will be approved by all users of hand-feed arc lamps. In all other types of lamps, if the carbons get out of alignment, a good light cannot be got on the sheet because a crater is being formed on the side of the carbon instead of the front.

In such lamps this cannot be corrected while the lamp is in use.

In this lamp (see handle A), a new principle is introduced. This handle actuates the whole of the top carbon holder arm and allows a lateral movement either way of nearly an inch, and the carbons can always be brought into absolute alignment whilst the arc is working. **£6 10 0**

## Improved Hand-Feed Arc Lamp.

MODEL F.

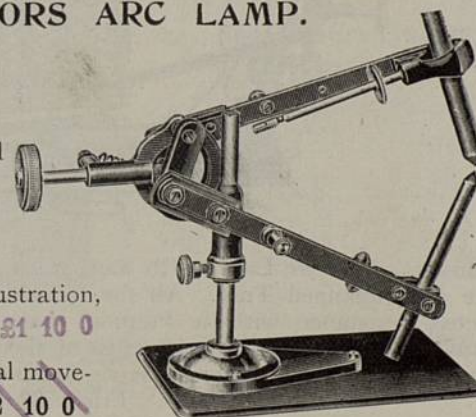


This Lamp is similar to Model E., but with the carbons suitable for direct current.

This Lamp will carry 120 amps. Price, **£6 10 0**

## SCISSORS ARC LAMP.

Suitable for Theatre Lighting or for use in Optical Lanterns and will carry 25 amps.



Complete on Tray as Illustration,

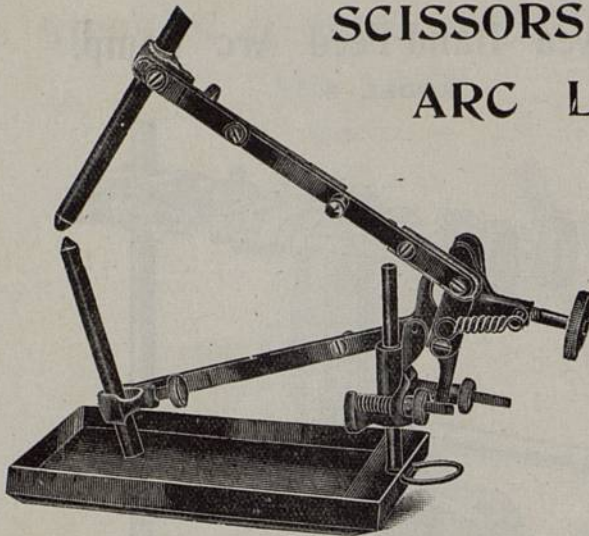
~~£1 15 0~~ **£1 10 0**

Ditto with all mechanical movements for centring, **£2 10 0**

SEE LEAFLET.



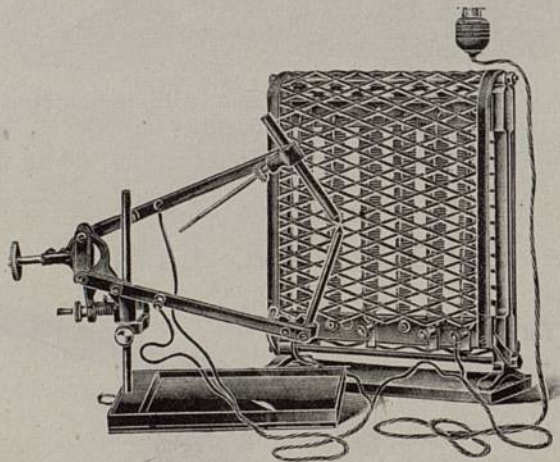
## SCISSORS ARC LAMPS.



Hand-feed, movements in all directions, for alternating or continuous current of 8 to 15 amps. Suitable for ordinary projections. Price £1 5 0

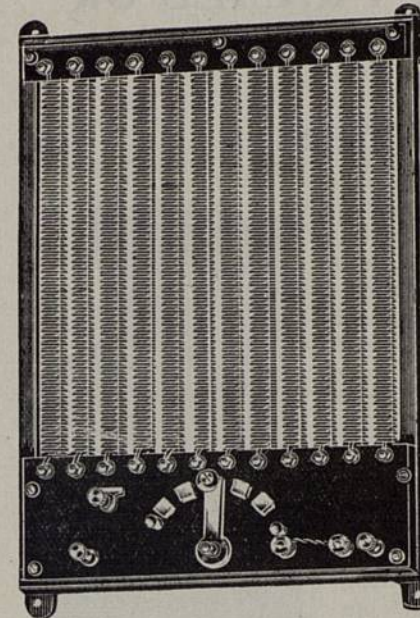
### ELECTRIC ARC LAMP.

For use from the House supply.



Consists of an Arc Lamp with mechanical movements for centring the Arc Japanned Tray. All the handles are insulated. A protected resistance with a fireproof base with brass terminals, adjustable from 250 volts, 3 yards of flexible wire with plug for attaching to any ordinary electric lamp holder, and 50 pairs of carbons. Price, £2 8 0

## Resistance Frames or Rheostats.

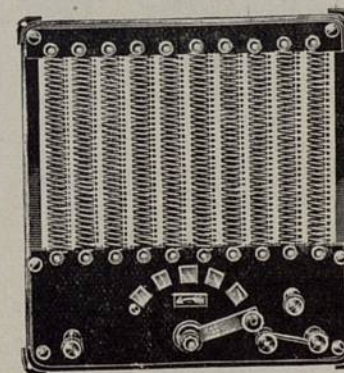


### FRAME PATTERN.

Strong Iron Frames, enamelled slate mounts with spirals of special alloy, spaced apart to prevent accidental short circuiting. The switches are very substantial, and fitted with adjustment to take up wear, and an off position; fuse terminals are also provided.

For any Supply Circuit up to 250 volts.

No.	Amps.	Size of Frame.	Circuit.	Price.
3	8 to 15	18 x 15	250 Volt	3 5 0
3a	12 to 20	18 x 15	250 "	3 10 6
4a	15 to 30	21 x 19	250 "	4 0 0
4	25 to 40	21 x 19	250 "	4 10 0
5	25 to 60	26 x 19	120 & 250	4 15 0
7	25 to 60	26 x 19	120, 250 & 480	9 10 0



### FRAME PATTERN.

For any Supply Circuit up to 110 Volts.

No.	Amps.	Size of Frame.	Circuit.	Price.
2	10 to 25	18 x 15	110 Volt	3 0 0
8	20 to 40	17 x 16	"	3 10 0
9	30 to 60	17 x 16	"	4 0 0

Special Resistances made to Customers' Requirements.

— ESTIMATES GIVEN. —



## RESISTANCE FRAMES OR RHEOSTATS.

### BOX PATTERN.

Strong Ventilated Iron Box, having the coils inside, enamelled slate on the top, with 6 multiple Contacts and Fuse cut out, 3 terminals, the centre one being connected direct to switch, and the other two being—one 250 volts and the other for 120 volts circuit—to connect to switch or lamp. A hinged Iron Cover closing the top, for travelling purposes.

For currents up to 50 amps. £8 0 0

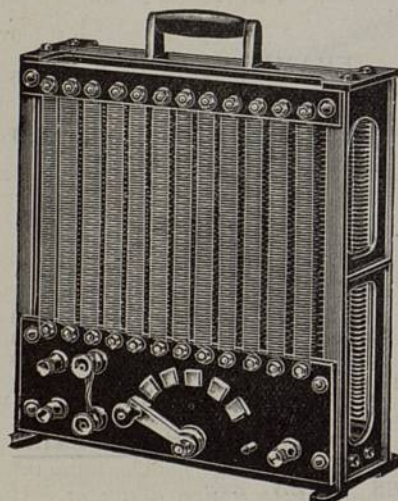
### HIGH-POWER RESISTANCE.

Box type for 480 volts, 50 to 80 amps., with a tapping for 250 volts and one for 100 volts.

£12 0 0



### IMPROVED TYPE TO STAND ON FLOOR.



Specially built for the travelling exhibitor.

Fitted with six switch contacts and "off" position with terminals for 250 and 120 volts circuits, and also fuse terminals.

Will pass 25 to 60 amps. on above circuits.

Price £7 0 0

**Smaller Type**, giving 15 to 40 amps. on 120 and 250 volts circuits.

£6 0 0

**Lantern Type**, giving 8 to 20 amps. on 120 and 250 volts circuits.

£4 0 0

## CARBONS.

### Best Electric Light Carbons.

Price per package of 25 pairs.

FOR CONTINUOUS CURRENT.						s. d.
No. 0.	3 to 6 amperes	(6 <sup>m</sup> /m solid and 8 <sup>m</sup> /m cored)				1 0
1.	5 to 10 "	(7 " " 10 " " )				2 0
2.	10 to 15 "	(10 " " 13 " " )				2 6
3.	15 to 25 "	(12 " " 16 " " )				3 6
4.	25 to 40 "	(13 " " 18 " " )				4 0
5.	30 to 60 "	(14 " " 20 " " )				4 6
6.	40 to 80 "	(16 " " 22 " " )				5 6

### ALTERNATING CURRENT.

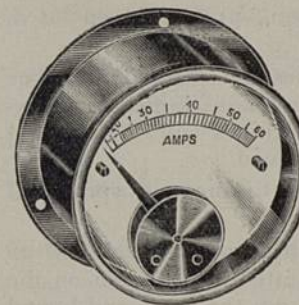
No. 7.	10 to 20 amperes	(10 <sup>m</sup> /m cored)	...	...	...	2 0
8.	20 to 30 "	(13 " " )	...	...	...	3 0
9.	33 to 50 "	(18 " " )	...	...	...	5 6

## CABLE.

Specially suitable for Lantern and Cinematograph work. Pure and vulcanised india rubber insulated, taped and braided.



Size	19/18 SWG, carrying capacity	35 amperes	...	Per yard.
" 19/17 "	" " " 50 "	...	...	1/10
" 19/15 "	" " " 75 "	...	...	2/3
				3/4

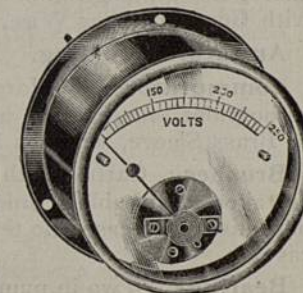


## Ammeters.

	Diam. 4 inch.	6 inch.
10 to 30 amps.	£1 10 0	£2 0 0
15 to 50 "	1 12 0	2 0 0
15 to 100 "	1 15 0	2 10 0

## Voltmeters.

	Diam. 4 inch.	6 inch.
Reading to 160 Volts—	£1 10 0	£2 5 0
" 250 Volts—	1 15 0	2 11 0



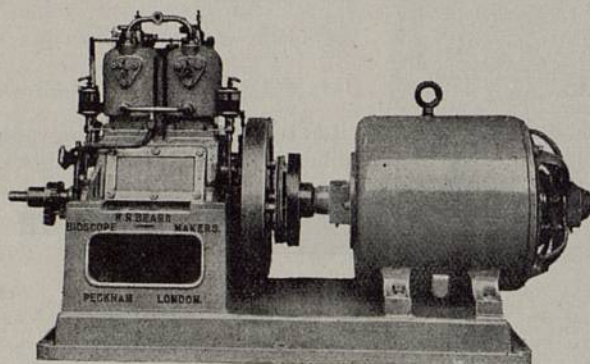
Front or back connections are fitted to the 4 inch diameter instruments, and back connections only to the 6 inch diameter. If front connections are required the price will be 5/- extra.



## Combined Paraffin or Petrol Electric Sets.

### Specification of Standard Semi-enclosed Dynamo.

Made under the "Zone" Patents, as supplied to H.M. Office of  
Works, Foreign Office, Central Stations, etc.



**Type.** All sizes are made, either open, protected, enclosed, ventilated, or totally enclosed.

**Field Winding.** Either Shunt, Series or Compound; one specially shaped field coil giving a perfect magnetic field, and exceptionally good commutation. These machines will run, without injurious sparking, up to 50 per cent. overload.

**Shaft.** Mid Steel, of ample strength to prevent springing, having all key-ways machine cut.

**Armature.** Slotted core "Drum" built up of Discs of No. 26 gauge Charcoal Iron, well insulated and fitted to a feather on the shaft; the windings to be well insulated from the core, and bound with German Silver Wire, the whole being perfectly balanced.

**Armature Winding.** Former Wound.

**Commutator.** Of Hard Drawn Copper, insulated with Mica throughout, mounted on and suitably insulated from a Cast Iron or Brass Sleeve, which is keyed to the shaft.

**Brushes.** Carbon with fixed position for all loads; the leads to be taken to suitable terminals, which are screwed to an insulated base inside the case; no terminals of any sort being exterior to the case.

**Bearings.** Two in number, of Phosphor-Bronze with Self-oiling Rings, ensuring perfect and even lubrication, and so arranged that the Machine may be fixed to the wall, ceiling, or floor.

### Specification of Engine.

**Cylinders.** Of close-grained cold-blast iron, with large water jackets for easy circulation of water on the thermo-syphon system; excepting our triple-cylinder engine, which is cooled by rotary pump circulation, this is just as simple as our single-cylinder series, there being only one joint for the inlet and one for the exhaust. A tap is fitted to drain the water from cylinder jacket on all sizes when stopped in frosty weather.

**Valves.** Steel forgings are all mechanically operated.

**Pistons.** Cast iron, fitted with three or four rings, the gudgeon being held in position by a wider ring, which also acts as a piston ring.

**Crank Case.** Has large door in addition to the inspection door, and is fitted with a drain cock which, when the bend is turned upright, shows the correct level of lubricating oil necessary.

**Crank.** Steel forging, the main bearings being three diameters long for continuous running, and properly balanced.

**Connecting Rod.** Steel forging, bearings of phosphor-bronze of ample dimensions, lined with anti-friction metal—best quality obtainable.

**Ignition** is electrical by high-tension magneto.

**Contact Maker.** Wipe contact of most substantial type for running on coil and accumulator ignition.

**Lubrication.** Forged. By Pump. This has proved most satisfactory.

**Governor.** Very sensitive, acting on the throttle within 5% from no load to full load. Can be instantly adjusted to suit requirements.

**Vaporiser.** Special design, giving perfect combustion at all loads, the exhaust being absolutely invisible and odourless. No constantly burning blow-lamps to give trouble.

**Coupling.** Flexible or solid type.



## COMPLETE SPECIFICATION.

The Lighting Sets are complete with engine direct coupled to shunt wound dynamo, mounted on cast iron bed-plate as illustrated (voltage to suit customers' requirements) and include the following items:—Starting handle, oil feeder, set of three double-ended spanners, cap spanner, silencer of suitable dimensions, two exhaust bends, one exhaust pipe, cooling vessel, 4 flanges, 4 bends, 4 backnuts, brass cock and two lengths of pipe, fuel tank of soft steel terne coated and enamelled, divided to hold a small quantity of petrol, remainder paraffin, fitted with two patent-sight gauge glasses, two brass filling caps, two brass cocks, two copper bends with cones and nuts for connecting two-way cock inclusive, patent fuel filter cock, one length of copper fuel pipe.

**SPARES AND RENEWALS.** All parts are made to gauge and interchangeable.

**GUARANTEE.** Within twelve months from the date of purchase, we undertake to make good any defect discovered in any of the machines, in respect of material and workmanship, provided that notice is given as soon as it is discovered, and that the machine, or defective part, is immediately forwarded to the works carriage paid. Responsibility is in all cases limited to the cost of making good the defect. We disclaim any responsibility for any repairs made or attempted to be made by other parties without our written sanction. This guarantee is to exclude and take the place of any condition or warranty implied by statute or otherwise, and does not apply to defects caused by improper fixing or application, wear or tear, accident or neglect. Illustration in this list fairly represent the different types, but are not necessarily binding as to detail.

Output in Watts.	Price.			Number of Cylinders.	Revolutions per Minute.	If Cooling Vessel and Long Pipes are not required, deduct.			If Coil and Accumulator Ignition is preferred to Magneto, deduct.
	£	s.	d.			£	s.	d.	
700	50	0	0	One	1000	1	7	6	3
1500	66	0	0	One	900	1	15	0	3
3000	93	0	0	One	800	1	17	6	3
3500	140	0	0	One	500	2	0	0	5
4000	155	0	0	Triple	700	2	5	0	8
5000	160	0	0	Triple	800	2	10	0	8
6000	165	0	0	Triple	900	2	10	0	8

Add extra if both  
ignitions are required.

NOTE.—No special fuel oil required. No red-hot vaporiser. We have never had to renew one of our vaporisers. No constantly burning blow-lamp to give trouble. These outputs are obtained from our Paraffin Engines. If ordered as a Petrol Engine 15 per cent. more electrical output is obtained. Same price for either.



## Separate Sections of Catalogue.



### SECTION.

**A**   Lanterns, Carriers, Lenses, Elevators,  
      Sheets, etc.

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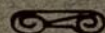
**B**   Bioscopes, Maltese Cross Projectors,  
      Home Cinematographs, Spool Boxes,  
      Iron Stands, Bioscope Lenses, Spools.

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**C**   Arc Lamps, Resistances, Carbons, Amp-  
      meters, Voltmeters, Switchboards.

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**D**   Compressed Gas Regulators, Gauges,  
      Biojector Jets, Collimator Jets, Mixed  
      and Blow-Through Jets, Injector Jets,  
      Limes, Fine Adjustment Valves.



*FREE ON APPLICATION.*