ILLUSTRATED CATALOGUE AND PRICE LIST OF ELETRICAL APPARATUS

THE ECONOMIC ELECTRIC CO.

TWICKENHAM, LONDON, S.W.

THIS LIST CANCELS ALL PREVIOUS PRICES.

TENTH EDITION ENTERED AT STATIONERS HALL.

E.W. Twining
CASH WITH ORDER.—The Company has always and will continue to do business on this system, which, if you consider, is directly to your advantage. We make no Bad Debts. No costly upkeep of books, consequently we can supply you goods which we can cut accordingly low in comparison with our competitors.

REMITTANCE.—If by actual cash it must be registered. Amounts under £ can be remitted in 8d. stamps. The most general way is by Postal or Money Order obtainable at any Post Office in the United Kingdom. Cheques should be crossed and made payable to "The Economic Electric Co."

HOW TO ORDER.—It is not necessary to cut catalogue. Give list No. or full particulars of goods required. We draw on large stocks, and usually despatch all orders same day as received; therefore cannot accept cancellation of orders owing to pressure of business. If goods ordered are heavy or bulky it is advisable to send name of nearest railway station. Orders of 10s. and over will be acknowledged by return of post. If acknowledgment is required for a less sum enclose 1d. stamped postcard with order.

PACKING.—All goods are dispatched by experienced men, carefully packed and inspected before despatch. We reserve the right to be entertained by us for damage to goods in transit but should be made direct to carriers or road company.

POSTAGE.—Sufficient money must in all cases accompany order to cover postage. Any money sent in excess will immediately be returned to sender. With our system of posting we obtain receipt for each parcel. Should same be lost in post the value can be immediately recovered from the Post Office.

IMPORTANT.—When goods arrive, if you require any alteration or exchange it is most essential that you quote number on top right-hand corner of invoice when writing us. We despatch an average over 100 parcels per day, and it is difficult to trace an invoice unless No. is given. Invoice, together with further order form, will be found in with goods.

QUERIES.—We take pleasure in carefully replying to all customers' queries, which average 20 to 30 per day. We must, however, ask those who seek advice to enclose 1d. stamp for reply.

POSTAL INFORMATION.

POSTAL ORDERS.

Money Orders.

Letter Post.

For 4 oz. 1d. for each additional 2 ozs. 4d.

Saturdays 9 A.M. to 9 P.M.

COLONIAL & CONTINENTAL ORDERS.

Our increasing Export Trade with the Colonies and Continent is sufficient guarantee that our manufactures are giving entire satisfaction to customers across the seas. We thank them for their orders, repetition orders and testimonials that we are constantly receiving, each bearing ample testimony to the quality and reliability of our goods.

TERMS.—As for Home, with few exceptions.

CUSTOM DUTIES.—Payable on arrival of goods.

REMITTANCE.—Postal or Money Order made payable G.P.O., LONDON, or by cheque drawn on London or English Bank.

SHIPPING.—Free On Board London. When remitting extra 10 per cent. on cost of goods should be enclosed to cover Shipping, Dock Dues, Special Packing, &c. Any money received in excess will be credited to customers' a/c or returned if preferred.

FREIGHT RATES (Approx.)

<table>
<thead>
<tr>
<th>TASSMANIA &amp; AUSTRALIA</th>
<th>NEW ZEALAND</th>
<th>CEYLON &amp; INDIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boxes or Parcel by Steamer</td>
<td>Boxes or Parcel by Steamer</td>
<td>Boxes or Parcel by Steamer</td>
</tr>
<tr>
<td>per lb. charge</td>
<td>per lb. charge</td>
<td>per lb. charge</td>
</tr>
<tr>
<td>Adelaide</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Brisbane</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Fremantle</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Melbourne</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Perth</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Sydney</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Hobart</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Launceston</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Other Ports or Railway Sta.</td>
<td>6/</td>
<td>5/</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOUTH AFRICA</th>
<th>WEST INDIES</th>
<th>VARIOUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capetown</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Durban</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>East London</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Port Elizabeth</td>
<td>1/</td>
<td>1/</td>
</tr>
<tr>
<td>Pretoria</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Bloemfontein</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Delagoa Bay</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Johannesberg</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Kimberley</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Malacka</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Natal</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Orange R. Colony</td>
<td>2/</td>
<td>2/</td>
</tr>
<tr>
<td>Rhodesia</td>
<td>7/</td>
<td>7/</td>
</tr>
<tr>
<td>Any Railway Sta. in Cape Colony</td>
<td>2/</td>
<td>2/</td>
</tr>
</tbody>
</table>

N.B.—Above is exclusive of Landing and Custom Clearance Charges.

PARCEL POST (Recommended.)

| Hong Kong & Straits Settlements | Canada, 1 lb., 6d. each, addit. lb., 3d. 1/3 lb., 1d. | Australia, 1 lb., 3d. 1/3 lb., 1d. |
| East African Ports | Aden | 1/ |
| Tasmania | Egypt | 1/ |
| New Zealand | Ceylon | 1/ |
| India | Gibraltar | 1/ |
| China | Malta | 1/ |
| British East Africa | Mozambique | 1/ |
| Gold Coast | Lagos | 1/ |
| West Indies | British Somaliland | 1/ |

SPECIAL DEPT. FOR FOREIGN DESPATCH.
THE E.E. CO., TWICKENHAM, LONDON, S.W.
Established 1896.

DOOR CONTACTS AND BURGLAR ALARMS.
Our Contacts and Alarms are genuine London made, on which you can place every reliance. They are substantially made and have Silver Contacts.

**DOOR CONTACT.**
To attach over doors, &c. Rings when door opens and shuts.
Each 8d. Postage 1d.

**KNEE FORM ALARM.**
Rings on door opening and shutting.
Each 1½d. Postage 1d.

**SPECIAL ALARM.**
Easy to fit, rings on door opening only.
Each 1½d. Postage 1d.

**SECRET ALARM.**
To fit into lamb of door, window, &c. Keeps ringing all time window or door is open.
Each 9d. Postage 1½d.

**WINDOW BALL CONTACT.**
Rings immediately window or door is open.
Each 1½d. Postage 1½d.

**LETTER BOX ALARM**
on Ebonite Base.
Each 2½d. Postage 1½d.

**ALARM FOR CURTAINS OR BLINDS.**
Each 1½d. Postage 1½d.

**PEAR Push and ROSETTE.**
The complete set ready for fitting, with fits of Best Bell Silk Flexible Wire, any colour (2 illustrations).
Each 1½d. Postage 1½d.

**PEOPLE PUSH.**
Marks Quantity, in Satin Walnut, &c., &c. Ebon. ½d.

**PEAR PULL and ROSETTE.**
The complete set ready for fitting, with fits of Best Bell Silk Flexible Wire, any colour (2 illustrations).
Each 1½d. Postage 1½d.

**BEST QUALITY TEN FUSE WIRES (HIGHLY REFINED).**

<table>
<thead>
<tr>
<th>Size</th>
<th>Fusing Point</th>
<th>For Id.</th>
<th>per oz.</th>
<th>per lb.</th>
<th>For Id.</th>
<th>per oz.</th>
<th>per lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 SWG</td>
<td>48 amps.</td>
<td>1 foot</td>
<td>1/4</td>
<td>2</td>
<td>26 SWG</td>
<td>57 amps.</td>
<td>3 yards</td>
</tr>
<tr>
<td>16</td>
<td>50</td>
<td>2</td>
<td>45</td>
<td>7</td>
<td>7</td>
<td>4/7</td>
<td>7</td>
</tr>
<tr>
<td>18</td>
<td>50</td>
<td>2</td>
<td>45</td>
<td>7</td>
<td>7</td>
<td>4/7</td>
<td>7</td>
</tr>
<tr>
<td>20</td>
<td>50</td>
<td>2</td>
<td>45</td>
<td>7</td>
<td>7</td>
<td>4/7</td>
<td>7</td>
</tr>
<tr>
<td>22</td>
<td>50</td>
<td>2</td>
<td>45</td>
<td>7</td>
<td>7</td>
<td>4/7</td>
<td>7</td>
</tr>
<tr>
<td>24</td>
<td>50</td>
<td>2</td>
<td>45</td>
<td>7</td>
<td>7</td>
<td>4/7</td>
<td>7</td>
</tr>
</tbody>
</table>

POSTAGE EXTRA, according to quantity.

**BARE OVERHEAD HARD-DRAWN COPPER WIRES.**
A Special Low Resistance Wire suitable for Telephones.

<table>
<thead>
<tr>
<th>Size</th>
<th>Weight</th>
<th>Per mile, Yards</th>
<th>Resistance, Price, Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>110 lbs.</td>
<td>10</td>
<td>9 ohms 1/5</td>
</tr>
<tr>
<td>16</td>
<td>110 lbs.</td>
<td>10</td>
<td>14 1/2 lbs. 1/8</td>
</tr>
<tr>
<td>18</td>
<td>110 lbs.</td>
<td>10</td>
<td>25 lbs. 1/8</td>
</tr>
<tr>
<td>20</td>
<td>110 lbs.</td>
<td>10</td>
<td>40 lbs. 1/8</td>
</tr>
</tbody>
</table>

WE CAN SUPPLY BARE WIRES ANY GAUGE.

YOU KNOW AN E.E.C. ARTICLE—IT'S ALWAYS SOUND.
THE E.E. CO., TWICKENHAM, LONDON, S.W.

ELECTRIC WOOD PUSHERS.
Made from Carefully Selected Woods, with Superior Polish, White Plungers, and German Silver Contact Springs. Supplied in numerous patterns (as illustration).

---

List No. 64.
CHEAP QUALITY.

<table>
<thead>
<tr>
<th>Quality</th>
<th>2 ins.</th>
<th>5 ins.</th>
<th>10 ins.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>5d.</td>
<td>10d.</td>
<td>2s.</td>
</tr>
<tr>
<td>Best</td>
<td>6d.</td>
<td>14d.</td>
<td>3s.</td>
</tr>
<tr>
<td>Real Woods</td>
<td>6d.</td>
<td>14d.</td>
<td>3s.</td>
</tr>
</tbody>
</table>

Postage 1d. extra.

Real Coco Miniature Push, 1 in. diam., md. each.

**NOTE.** We deal largely in Electric Pushes and can give very close quotations for quantities.

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ELECTRIC CHINA PUSHES.

List No. 60.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Description</th>
<th>2 ins.</th>
<th>5 ins.</th>
<th>10 ins.</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>Plain, White, or Black</td>
<td>2s.1d.</td>
<td>5s.1d.</td>
<td>10s.1d.</td>
</tr>
<tr>
<td>61</td>
<td>Blue or Brown Flowers</td>
<td>3s.1d.</td>
<td>6s.1d.</td>
<td>12s.1d.</td>
</tr>
<tr>
<td>62</td>
<td>Gift Ivy Leaves on White</td>
<td>3s.1d.</td>
<td>6s.1d.</td>
<td>12s.1d.</td>
</tr>
<tr>
<td>63</td>
<td>Gold on White or Cream Ground</td>
<td>3s.1d.</td>
<td>6s.1d.</td>
<td>12s.1d.</td>
</tr>
<tr>
<td>64</td>
<td>Imitation Marble</td>
<td>3s.1d.</td>
<td>6s.1d.</td>
<td>12s.1d.</td>
</tr>
<tr>
<td>65</td>
<td>Gift Scroll on Pink Ground</td>
<td>3s.1d.</td>
<td>6s.1d.</td>
<td>12s.1d.</td>
</tr>
</tbody>
</table>

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LECLANCHE CELLS.

IN BOXES.

List No. 70.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Description</th>
<th>Each, Dov. Post.</th>
</tr>
</thead>
<tbody>
<tr>
<td>67</td>
<td>Plain, White, or Black</td>
<td>17 7/2</td>
</tr>
<tr>
<td>68</td>
<td>Blue or Brown Flowers</td>
<td>31 2/2</td>
</tr>
<tr>
<td>69</td>
<td>Gift Ivy Leaves on White</td>
<td>31 2/2</td>
</tr>
<tr>
<td>70</td>
<td>Gold on White or Cream Ground</td>
<td>31 2/2</td>
</tr>
<tr>
<td>71</td>
<td>Imitation Marble</td>
<td>31 2/2</td>
</tr>
<tr>
<td>72</td>
<td>Gift Scroll on Pink Ground</td>
<td>31 2/2</td>
</tr>
</tbody>
</table>

---

DRY BATTERIES.

List No. 69.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Description</th>
<th>Each, Dov. Post.</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>Plain, White, or Black</td>
<td>17 7/2</td>
</tr>
<tr>
<td>74</td>
<td>Blue or Brown Flowers</td>
<td>31 2/2</td>
</tr>
<tr>
<td>75</td>
<td>Gift Ivy Leaves on White</td>
<td>31 2/2</td>
</tr>
<tr>
<td>76</td>
<td>Gold on White or Cream Ground</td>
<td>31 2/2</td>
</tr>
<tr>
<td>77</td>
<td>Imitation Marble</td>
<td>31 2/2</td>
</tr>
<tr>
<td>78</td>
<td>Gift Scroll on Pink Ground</td>
<td>31 2/2</td>
</tr>
</tbody>
</table>

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THE "STUDENTS" GALVO.

High Class Instruments, Splendid Finish.

List No. 61.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Description</th>
<th>Each, Dov. Post.</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>Plain, White, or Black</td>
<td>17 7/2</td>
</tr>
<tr>
<td>62</td>
<td>Blue or Brown Flowers</td>
<td>31 2/2</td>
</tr>
<tr>
<td>63</td>
<td>Gift Ivy Leaves on White</td>
<td>31 2/2</td>
</tr>
<tr>
<td>64</td>
<td>Gold on White or Cream Ground</td>
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</tr>
<tr>
<td>65</td>
<td>Imitation Marble</td>
<td>31 2/2</td>
</tr>
<tr>
<td>66</td>
<td>Gift Scroll on Pink Ground</td>
<td>31 2/2</td>
</tr>
</tbody>
</table>

---

THE "STUDENTS" GALVO.

High Class Instruments, Splendid Finish.

List No. 62.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Description</th>
<th>Each, Dov. Post.</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>Plain, White, or Black</td>
<td>17 7/2</td>
</tr>
<tr>
<td>63</td>
<td>Blue or Brown Flowers</td>
<td>31 2/2</td>
</tr>
<tr>
<td>64</td>
<td>Gift Ivy Leaves on White</td>
<td>31 2/2</td>
</tr>
<tr>
<td>65</td>
<td>Gold on White or Cream Ground</td>
<td>31 2/2</td>
</tr>
<tr>
<td>66</td>
<td>Imitation Marble</td>
<td>31 2/2</td>
</tr>
<tr>
<td>67</td>
<td>Gift Scroll on Pink Ground</td>
<td>31 2/2</td>
</tr>
</tbody>
</table>

---

LINESMAN'S DETECTORS.

High Class Instruments, Splendid Finish.

List No. 63.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Description</th>
<th>Each, Dov. Post.</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>Plain, White, or Black</td>
<td>17 7/2</td>
</tr>
<tr>
<td>64</td>
<td>Blue or Brown Flowers</td>
<td>31 2/2</td>
</tr>
<tr>
<td>65</td>
<td>Gift Ivy Leaves on White</td>
<td>31 2/2</td>
</tr>
<tr>
<td>66</td>
<td>Gold on White or Cream Ground</td>
<td>31 2/2</td>
</tr>
<tr>
<td>67</td>
<td>Imitation Marble</td>
<td>31 2/2</td>
</tr>
<tr>
<td>68</td>
<td>Gift Scroll on Pink Ground</td>
<td>31 2/2</td>
</tr>
</tbody>
</table>

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ALL OUR GALVOS ARE GUARANTEED ACCURATE.
THE ECONOMIC ELECTRIC CO.

ELECTRIC BELLS.

This Company has for a number of years maintained a high reputation in the Electric Bell Trade for very Moderate Prices. Unquestionably our endeavour to supply a GOOD ARTICLES and yet compete at a low price has been entirely successful. We guarantee that nothing but absolutely the best tested materials are embodied in the manufacture of these Bells.

All our Electric Bells are mounted on Selected Seasoned Polished Wood Bases. Bobbins are wound with Best Quality High Conductivity Silk Covered Copper Wires, Terminals and all Metal parts heavily Nickel-plated. We fit Cast Metal Nickel-plated Gongs to all our Bells, therefore it is IMPOSSIBLE for them to lose their rich tone or RUST.

The Company's Electric Bell Gongs are far famed and " streets ahead" of any other make for their Remarkably Clear Note and Rich Tone. It must not be forgotten that we have a lead with over TWELVE YEARS' experience.

MEDIUM QUALITY.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Size of Gong</th>
<th>Approx. Weight</th>
<th>Round Gong</th>
<th>Sheep or Church Gong</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>2½ in</td>
<td>12 oz</td>
<td>1½</td>
<td>1/6</td>
</tr>
<tr>
<td>74</td>
<td>2½ &quot;</td>
<td>13 &quot;</td>
<td>1½</td>
<td>1/8</td>
</tr>
<tr>
<td>75</td>
<td>3</td>
<td>16</td>
<td>1½</td>
<td>1½</td>
</tr>
<tr>
<td>76</td>
<td>3½ &quot; 1 lb. 10 oz.</td>
<td>2½ &quot; 1½</td>
<td>2½</td>
<td>1½</td>
</tr>
<tr>
<td>77</td>
<td>4 &quot; 14 &quot;</td>
<td>2½</td>
<td>2½</td>
<td>1½</td>
</tr>
</tbody>
</table>

BEST QUALITY.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Size of Gong</th>
<th>Approx. Weight</th>
<th>Round Gong</th>
<th>Sheep or Church Gong</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>2½ in</td>
<td>1 lb. 3 oz</td>
<td>2½</td>
<td>2/3</td>
</tr>
<tr>
<td>79</td>
<td>2½ &quot;</td>
<td>1 &quot; 4 &quot;</td>
<td>2½</td>
<td>2½</td>
</tr>
<tr>
<td>80</td>
<td>3</td>
<td>1½ &quot; 5 &quot;</td>
<td>2½</td>
<td>2½</td>
</tr>
<tr>
<td>81</td>
<td>3½ &quot; 1 lb. 10 oz.</td>
<td>4½ &quot; 2½</td>
<td>3½</td>
<td>3½</td>
</tr>
<tr>
<td>82</td>
<td>4 &quot; 2½ &quot;</td>
<td>4½</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td>83</td>
<td>5 &quot; 3 &quot;</td>
<td>5/6</td>
<td>5/6</td>
<td>5/6</td>
</tr>
<tr>
<td>84</td>
<td>6 &quot; 3½ &quot;</td>
<td>7½</td>
<td>7½</td>
<td>8½</td>
</tr>
</tbody>
</table>

POSTAGE, 4d. and 8d. according to weight. Lowest 4d. per Bell.

Specially Light but Substantially Made 23 in. Bells for Export, weight 94 oz., price, each, 1/8; per dozen, 1½.

To ELECTRICIANS.—Should the sample you have purchased prove what is wanted for your work, remember we can quote you very special and reduced prices for 12s. lots, and supply promptly.

SPECIFICATION FOR BEST QUALITY BELLS.

Real Selected Treated Polished Wood Bases and Covers, Cast Iron Frame Enamelled Black with Polished Edges, Bell Metal Gongs (impossible to rust), Deep Rich Tone and Clear. Bobbins wound with Best Quality H.C. Green Silk Wires, well insulated. All connections grouped in base and insulated by Paraffin Wax. Brushed Brass Ejector for fixing to wall. The prices we quote for these Bells, considering the quality, is very CLOSE, and is only maintained by our large annual output.

8 COMPARE THESE PRICES WITH RIVAL COMPETITORS.
ELECTRIC BELLS—continued.

CHIMING BELLS.

These Bells have each a distinct and different tone. They are of various sizes and shapes—Church, Sheep, &c.—and so arranged that the sound is easily distinguishable.

List No. | SETS OF | PER SET | POSTAGE |
---|---|---|---|
96 | 2 Bells | 4/6 | 7 |
97 | 3 | 6/6 | 8 |
98 | 4 | 9/6 | 10 |
99 | 5 | 12/ | 12 |
100 | 6 | 14/ | 14 |

Car. Forward

List No. 96.

ELECTRIC BUZZERS.

These instruments make a soft buzzing sound and so take the place of Electric Bells, where less noise is required, for Offices, Sick Rooms, Telephones, &c.

List No. 101. Best Quality, ready for fixing.
Each 3/6.

ELECTRIC RELAYS.

These Relays are specially designed for Bell and Telephone Circuits where long stretches of line are worked.


List No. 102.

OUTDOOR WATROOF BELL SETS.

Specially recommended for use where Bells are mounted out of doors in exposed positions. Heavy Cast Iron Cover and Base. Reliable Movement. Bell—Metal Gong (thereof impossible for it to rust) and Well Insulated.

List No. | Size of Gong | EACH |
---|---|---|
103 | 4 inches | 11/6 |
104 | 5 | 12/6 |
105 | 6 | 14/6 |
106 | 8 | 23/ |
107 | 10 | 44/ |
108 | 12 | 58/ |

Carriage Forward

List No. 103.

LIST NO. 103.

THE "RIVAL" BELL SET.

One of our cheapest lines. Consists of one Reliable Electric Bell, one E.E.C. Dry Battery (Large size), 12 yards 22 D.C.C. Wire (any colour), one Polished Wood Push, German Silver Springs, Staples, and Complete Diagram of Connections. List No. 923.

Price (the Complete Set) 2/6; postage, 6d. extra. Extra 12 yards of Wire, 3d. extra; Extra Battery, 1/ each. N.B.—Usual price at other Electricians, 3/. Annual sale over 1,000 Complete Sets.

THE "ECON" BELL SET.

The value of the "Econ" Set is renowned. Consists of one of our Special Nickel Plated, 24 in. Electric Bells, 25 yards of 24 D.C.C. Wire, one Best Quality Wood Push, packet of Staples, one 2-pint Leclanche (or, if preferred, one Reliable E.E.C. Dry Battery), full Printed Diagram of Connections in with each Set. List No. 924.

Price (the Complete Set) 3/6; postage, if with Dry Battery, 6d. extra; if with Leclanche Battery, 11d. extra. Extra Call of Wire, 6d. Extra Battery, 1/.

VALUE FOR MONEY: THE "ECON" BELL SET.

THE "EMPIRE" BELL SET.

Consists of one 24 in. No. 75 Best Quality Bell, two E.E.C. Dry Batteries (or, if preferred, two Leclanches), one 3 in. Hard Wood Polished Push, 55 yards 22 D.C.C. Insulated Wire, packet of Staples, and Full Diagram of Connections.

List No. 925.

Price (the Complete Set) 6/; carriage forward.

THE "E.E.C." PORTABLE SET.

Mounted on Selected Polished Wood Cabinet, consisting of one 24 in. Soft Clear-Toned Bell, one Reliable E.E.C. Dry Battery, Wire Flexible Cords (12 yards), and one Push Pull. All Ready Connected for immediate use. List No. 946.

Price 10/6.

A very suitable Set for Invalid at a reasonable price.

THE "RELI" BELL SET.

Total height, 12 inches. Consists of a Smart, Clear-Toned Electric Bell, one Round or Square "E.E.C." Dry Cell, six yards Bell Flax, (any colour), Push Pull or Bell Push. Mounted on Polished Wood Stand. All Ready Connected ready for use. List No. 927.

Price 3/6; postage 6d. (as Illustration). Same can be supplied with Two Batteries, 1/6 extra. Extra Wire, 1d. per yard.

THERE'S NOBODY

can supply you a Cheaper and more Reliable Bell Set than the "Economic" ACTUAL MANUFACTURERS OF AMATEURS' REQUISITES.

NO NEED TO QUESTION—"ECONOMIC" PRICES ALWAYS RIGHT!
ELECTRIC ALARM CLOCK SETS.

Fitted with our Improved and Reliable Electric Contacts—one of the most efficient on the Market. Both the Electric and Alarm Bells ring immediately and continue until the current is switched off. Nothing could be louder and more certain.

List No. 120
Electric Alarm Clock. Fitted with our latest improved Electric Contacts. Nickel Plated, Regulator, etc. Postage 4d. extra. 3/6

110 Complete Electric Alarm Clock Set (as illustration), comprising one Electric Alarm Clock No. 109, one 24-in. Electric Bell, 6 yards Twin Silk Flexible Wire, one One-Way Nickel Plated Switch, one quart Lechane or one improved “E.E.C.” Dry Cell. Postage 4d. extra. 6/6

111 Similar to above but with No. 110 Clock. Extra (if required) Coil of Wire, 6d. “E.E.C.” Dry Battery, 1 od. 9/6

112 Similar to above Set but with No. 110 Clock. Extra 9/6

113 Handsome Electric Alarm Clock Set, mounted on and comprising one Selected Wood Polished Cabinet containing one quart Lechane or one “E.E.C.” Dry Battery, one Loud Toned Electric Bell, one Polished Switch. The whole most compact and ready connected for use. 12/11

114 Similar to 113 but fitted with Best Quality Clock. Extra 16:

NOTICE.—Should customers require their own Alarm Clocks converted into Electric Alarm and fitted with Terminals, we do this at 1/6 each. Customer paying Carriage both ways.

All our Electric Alarm Contacts are fitted in such a manner that by removing a Terminal the Electric Contact is removed and the ordinary alarm can be used in its place.

WOOD AND BRASS LAMP STANDS.

List No. Each.
210 Handsome Polished Real Teak Standard for Loop Lamps, Connected ready for use. 1/0

211 Similar to above but fitted with Brass Bayonet Holder for Capped Lamps. 1/2

212 Very Handsome Solid Brass Lamp Holder, Lacquered and Polished, Fitted with Best Quality Brass Holder (as illustration) Without Lamp. Postage on Stands 1d. extra. 1/1

INDICATOR MOVEMENTS ONLY.

To save expense of complete Indicator many customers buy movements only, and mount on ordinary stained boards.

List No. Each.
115 Mechanical. 1/2
116 Electrical. 1/4
Postage on single Movements 1/4 extra.

BEST STEEL BOBBINS.

Manufactured from Hard Woods, polished ends, and carefully turned. High Conductivity Green Silk Cover. Wire, Flanges.

FIBRE INSULATED STAPLES.

Avoid cutting the insulation on your wires, make doubly sure of getting a good test, use these staples and do away with all this trouble.

List No. Size. Per Doz. Per 100. Per 1000.
114 1/8 1/2 1/11 8/ Not less than 1 lb.
119 3/16 2 7/ 9/ 10/ Not less than 1 lb. 1/1
119 1/4 3/16 1 15/ 10/ POSTAGE extra $1 and 2 in., 11/4 grs. $11

Postage 1/2 and 1/2 extra.

CONTRACTORS TO H.M. GOVERNMENT AND PRINCIPAL RAILWAYS.

Telephone—316 F.O. Richmond
ELECTRICAL INDICATORS.

THOROUGHLY reliable Cases and Movements, in Imitation Teak Cases, with Rea Selected Teak Front, and fitted with our Standard Best Quality Movements.

COMPLETE INDICATORS

Wired and Fitted with PENDULUM MOVEMENTS.

2 and 3 Holes. 1/4 per hole. 3/4
4 Holes and upwards 1/4 per hole. 3/4

MECHANICAL MOVEMENTS.

2 and 4 Holes. 1/2 per hole. 5/8
4 Holes and upwards 2/4

ELECTRICAL REPLACEMENT.

Up to 4 Holes. 6/6 per hole. 5/10
Holes and upwards 3/6

Electric Bell to Indicator 2/0
Or any Name or Address in Gold or Brass 1/1
Number or Name of Room in Gold or Brass per letter, 2/0
Customers’ Name Free on all Indicators.
Send Indicator Front Glasses up to 3 holes, 2 1/2 each.
Each additional hole 1/4 extra.

INDICATOR MOVEMENTS ONLY.

To save expense of complete Indicator many customers buy movements only, and mount on ordinary stained boards.

List No. Each.
115 Mechanical. 1/2
116 Electrical. 1/4
Postage on single Movements 1/4 extra.

BELL BOBBINS.

Manufactured from Hard Woods, polished ends, and carefully turned. High Conductivity Green Silk Cover. Wire, Flanges.
THE "PREMIER" DOMESTIC TELEPHONES.

These 'Phones are specially suitable for domestic use or from Shop to Stable, Warehouse, etc. They can be fitted to ordinary house Bell Circuits in a few minutes. NO ELECTRICAL KNOWLEDGE is necessary. They are portable, and provided each room is fitted with round push (as illustrations), can be taken from room to room at pleasure. With each Set of Instruments we enclose a clear printed diagram of connections. Don't confuse these phones with cheap models, remember they are guaranteed by the "Economic" reliable and clear speaking on all distances up to 150 yards.

Illustrations of two Instruments, No. 119. Diagram of Connections, No. 119.

List No. 119 comprises Two Improved "PREMIER" Hand Combination Transmitters and Receivers, Ringer Pushes, Automatic Switch Hook, Two-Pin Plug, 25 yds. 22 D.C. Telephone Wire, Two Reliable E.F.C. Dry Batteries (extra 25 yards, 6d.), and one 24 Loud Electric Bell. For ringing one-way Connections as above.

Instruments, single, 6/6; per pair, 12/6. Complete Set as above, 10/.

postage, 4d. postase, 6d. postage, 10d. extra.

List No. 120, Similar Set to No. 119, but fitted with four terminals to ring both ways. The Complete Set comprises as No. 119 with the exception of different instruments and an extra 24 in. Bell.

Instruments, single, 8/6; per pair, 16/. Complete Set, 20/.

Postage, 4d. Postage, 6d. Postage, 1/ extra.

Spare round pushes for No. 119, 1/9 each; for No. 120, 2/ each.

Printed diagrams of connections are sent with both Instruments or Complete Set. If you want advice write us enclosing stamp for reply.

THE "PREMIER" TELEPHONES.

No. 121 "PREMIER" is one of the cheapest and most reliable 'Phones in this Catalogue. Guaranteed perfect workmanship throughout. It is our latest improved Pattern brought thoroughly up-to-date and can be recommended for its CLEAR SPEAKING.

Mounted in selected Polish'd Real Walnut Case, with Special Long Distance Induction Coil, Double Pole Watch Receiver, Call Bell, Improved Form Granulated Carbon Transmitting with Silvered Mouthpiece, Ringer Key, Automatic Switch Hook, all metal parts brightly plated. Suitable up to 2 mile.

List No. 121 ... EACH 12/6.

THE "PREMIER" COMPLETE SET.

Comprising Two Telephone Stations, No. 121, Four Reliable Own Make E.F.C. Dry Cells, 25 yards 22D.C. Telephone Wire Staples, and full diagrams of connections with each Set.

COMPLETE SET ... 30/-.

THE "PREMIER" DESK 'PHONE.

Similar Instrument to 121, but fitted with Loud Tone Buzzer.

List No. 122 ... 1 way ... EACH 19 19.

" " 123 ... 5 5.

" " 124 ... 10 10.

" " 125 ... 15 15.

" " 120 ... 20 20.

THE "PREMIER" INTERCOMMUNICATION INSTRUMENT.

These Bovine Battery Wall Intercommunication Instruments we can supply up to 20 lines. A Special Pattern of Improved Long Switch is fitted, so that any subscriber can call up, no matter what position the Switch is left. Cross ringing with these Instruments cannot take place, being a decided improvement on the old patterns. Mounted in selected Polish'd Walnut Case, Revolving Granulated Carbon Transmitting, Double Pole Watch Receiver, Automatic Switch Hook, Ringer Key, All Parts Heavily Nickel Plated.

List No. 123 ... For 4 Lines ... EACH 1 1.

" " 130 ... 10 10.

" " 131 ... 15 15.

" " 132 ... 20 20.

" " 127 Battery ... 1 1.

" " 128 Table ... 2 2.

" " 128a Portable Telephone Sets in Case, with Magneto Generator, and Dry Cells ... 6 6.

CHEAPEST HOUSE FOR RELIABLE 'PHONES IN LONDON.
NEW PATTERN "PREMIER" 'PHONES.
Patented. Registered Nos. 367,301, 367,769, 447,866.
As things go you require a telephone to be always Ready and Reliable, something that won't easily get out of order, and is, above all, Clear Speaking. In our Latest Pattern Telephone, you have all these points embodied. Important improvements have been patented in this neat little instrument. Not a cup in transmitter to accumulate dust or germs, quite the most up-to-date phone from a health point of view.
Write direct now for a Set (or one if you wish). Rig them up and if you don't approve in three days, send them back. We guarantee to return Cash; Customer paying postage both ways.
List No. 658 Instruments only (including diagram of connections),
Reduced each 7/- (Postage 6d. extra.) Reduced each 6/-
List No. 598 Comprising 2 Loud Electric Bells, 2 Reliable E.E.C.
Dry Cells or 2 pint Leclanche, 25 yards Twin Bell Wire,
Staples, etc., together with 2 Complete Premier Telephones
and printed Diagram of Connections, Ringing both ways,
Reduced the set 22/6 (Carriage Forward.) Reduced the set 22/6

THE "MINIATURE" HANDY TELEPHONES.
A useful little 'Phone which any amateur can easily fit. Their compactness is only inferior to that of the Telephone. Each one is fitted with Watch Receiver, Graded Carbon Transmitter, Call Bell, Automatic Switch and Push, and the whole mounted in a selected finished case. Only two wires are required between the speaking units. They are Reliable and guaranteed not to break down.
List No. 608. Separate Instruments, each 6/- per pair, 1/- each.

Diagram of Connections sent with Instrument, Postage 6d.

List No. 609, Comprising 2 "Miniature" Telephones, 10 yards. 2 D.C. C.Wires,
2 Reliable E.E.C. Dry Cells, Staples, etc., together with full diagram of connections.

THE COMPLETE SET 20/6.

TELEPHONE & BELL ANNUNCIATORS.

List No. 660. For Battery Call & Tone Telephones, Each 10/-
List No. 663, 200 Ohms, Each 11/-

SPECIAL TELEPHONE TEST LINE.—E.E.C. Phones are Bound to be right when you receive them.

16
**LECLANCHE BATTERIES**

**Principally used for House Bells, Telephones, and in some cases Intermittent Electric Lighting.** The batteries are colloidal in nature and are manufactured in three types: Pot, Zine, and Glass. They are thoroughly amalgamated, giving twice the life, and further, a **strong** point, hard, **rolled not cast**.

**Directions:** Make up solution, 3 ozs. of Crystal Sal ammoniac to 1 pint of water; fill outer jar to one-third of top. If cell is required immediately, it is a good tip to use warm water for solution.

**Special Form of Bichromate for Medical Coils.**

**Bichromate Batteries (Bottle Form).**

The Bichromate is advised in all Electrical Books. Where a large current is required, the cell can find no equal. We strongly recommend them for Driving Electric Motors, Tram Cars, Shocking and Medical Coils, and in some cases Intermittent Electric Lighting. 10 pence per cell. 2 when in use always remove zinc from acid. A special attachment is provided for this purpose on all our Bichromates.

**Annual Sales** of Bichromate Batteries exceed over 2,000.

**The Latest "Defiance" Battery.**

A cheap and reliable Bichromate Battery for Amateurs.

The Defiance is placed in an ordinary jar, in quite the equal of any Bichromate made as regards power. Give 2 Years to each cell and comprises 2 Terminals, Supporter, Lifting Zinc Plate, two 5×12 Carbons, all connected ready for use. By doing away with jar the customers save 4d. in postage.

**Our Special Price.**

Complete, one Carbon, 1 Zinc 6d. each. 2 each 1 6d. each.

Postage 3d. extra.

Spare Zincs (drilled) 4d. each.

Carbons 1/2d. each.

**AGGLOMERATE LECLANCHE BATTERIES.**

(E.M.F. 1½ Volts per Cell).

Another form of Leclanche Battery. Does not polarize quickly and gives large current. Suitable for Telephone or Bells.

Complete Agglomerate Block only, 1/9 each 10 per pair 3 each 3/4 each.

**THE "BUNSEN" BATTERY.**

(E.M.F. nearly 2 Volts per Cell).

Exciting fluid Nitric Acid in Inner Pot, and Sulphuric Acid (1 to 12 parts water) in Outer Jar. Always remove Zinc from Jar when not in use; keep well amalgamated.

List No. 166.

<table>
<thead>
<tr>
<th>Size</th>
<th>Complete</th>
<th>Carbons</th>
<th>Zincs</th>
<th>Pots, Jars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
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</table>

For further description of this and all our Batteries, see our book "Electric Batteries," post free, 7.

**THE "DANIEL" BATTERY.**

(E.M.F. 1½ Volts).

An ideal battery for producing a constant current. Specially adapted for Electro Plating, Testing, or experimental work. Copper Sulphate in Outer Jar and dissolve Sulphuric Acid in Inner Jar.

List No. 167.

<table>
<thead>
<tr>
<th>Size</th>
<th>Complete</th>
<th>Carbons</th>
<th>Zinc</th>
<th>Cylinder</th>
<th>Pots, Jars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
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</table>

Copper Sulphate, 8 per lb., see page 23.

**WE HAVE OVER 12 YEARS, MANUFACTURING EXPERIENCE.**
THE "ECCON" CHARGING BATTERY.

Last year we received a great many inquiries from our customers for a really efficient battery for charging lead-acid accumulators. These enquiries we noted, were generally from country customers who could not obtain facilities for charging their cells locally, or again, others who preferred to arrange their own accumulator charging stations. To all these "THE ECCON," which we illustrate in this section, deserves their special attention. Its superiority over other makes is immediately apparent—Moderate Price, Efficient, Easy Replacement of Spare Parts, Chemicals, &c. Simplicity in working; and, above all, rapidity with which a charge is effected. It is a Two Fluid Battery, contains 4 carbons, 1 massive zinc in each cell. The Zines are heavily amalgamated. Note special placing arrangement for zincs.

DIRECTIONS.

Fill Outer Jar for three parts full with solution of Bichromate of Potash and Dilute Sulphuric Acid (1 part acid to parts water), put approximately 6 ozs. Bichromate into each cell with the dilute Sulphuric Acid.

Fill Inner Porous Pot with solution of dilute Sulphuric Acid, only 1 of 5 parts water. Put into this Inner Porous Pot sufficient Mercury to cover bottom, then replace Zinc on Mercury in pot.

Current can be regulated by adjusting the amount the zinc stands in solution.

BATTERY SETS COMPLETE (with Lifting Arrangement for Plates).


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</thead>
<tbody>
<tr>
<td>5 V.</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
<td>£1 9 0</td>
<td>£2 6 0</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
</tr>
<tr>
<td>4 V.</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
<td>£1 9 0</td>
<td>£2 6 0</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
</tr>
<tr>
<td>6 V.</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
<td>£1 9 0</td>
<td>£2 6 0</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
</tr>
<tr>
<td>8 V.</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
<td>£1 9 0</td>
<td>£2 6 0</td>
<td>£1 0 0</td>
<td>£2 6 0</td>
</tr>
</tbody>
</table>

It fitted with Ammeter (as illustration) add 8d. extra to above prices. Prices quoted are fitted with Lifting Terminals but without Ammeter. We are actual Manufacturers of these Sets, and can make any alteration to suit customers.

THE "DESTROYER."


4/10

Run at high speed and is self-starting on a volt. Weight: with propeller and shaft, 2½ ozs.; size, without shaft, 3½ in. long, 2¼ wide, 2½ in. high. Price includes Detachable Pulley for driving Models.

NOTE REASONABLE PRICES FOR RELIABLE CHARGING BATTERIES.
THE "E.E.C." BRITISH MADE DRY AND EXPORT BATTERIES.

Well-Known. Reliable. Large Current.

(ANNUAL SALE runs into thousands.)

Guaranteed manufactured throughout in our Twickenham factory from the best materials and under personal supervision. It is now an important branch of the "E.E.C." a well-known and very popular type of cell fitted with massive carbon plates and substantial zinc cases specially filled by improved and secret process. Remember "E.E.C." Cells will not freeze and are unaffected by climatic conditions. Further, we can supply you retail at wholesale prices direct from the factory.

List No. 173

Round (as illustration) size 6in. high by 2½in. diam. 10/6 9/6

174 " 4½in. " 1½in. 1/6 9/6

175 " Square Cell 4in. 1½in. 1/6 9/6

Postage, large size /6 extra, small size /4 extra.

NOTE—We are open to quote and in a position to supply any size cell to order for ignition or any purpose at very LOW PRICES.

THE "E.E.C." EXPORT DRY BATTERY.

For Colonial Customers we can thoroughly recommend this Cell. Will keep in stock for indefinite period without any deterioration. Directions on each Battery. Only water required to charge this Cell. Contained in glazed stone Jars. Impossible for "shorts" to occur.


THE "HELLESEN" IGNITION DRY CELL.

Most suitable for Motor Cyclists who require a Reliable and Cheap Form of Ignition. In case one finds a difficulty in charging accumulators we can with confidence recommend the "Hellesen."

List No. 178 The "Flash," 6in. by 4½in. by 2½in. 6/6

" 179 " Flight," 5½in. by 3½in. by 2½in. 6/6

To each purchaser of a Hellesen Cell we give a 20 page descriptive list.

AMATEUR ELECTRIC LIGHT SETS.

UP-TO-DATE. RELIABLE. EVER-READY.

The "Rival," List No. 157, consists of two "Defiance" Batteries, one 1½-volt Loop Lamp Carbon Filament, 6ft. Twin Silk Flexible Wire, one Sealed Bottle of Chromic Acid (directions for charging on bottle).

COMPLETE SET 2/6. Postage /6 extra.

The "Amateur's Own," List No. 166, consists of four "Defiance" Batteries, one 8-volt High Vacuum Loop Lamp, Loop Lamp Holder, one Nickel Plated Switch, four Sealed Bottles of Chromic Acid together with 18ft. Twin Silk Flexible Wire and diagram of connections.

COMPLETE SET 4/6. Postage /6 extra.

List No. 146, similar to the "Amateur's Own," but with six "Defiance" Batteries and one 1½-volt Lamp.


THE POPULAR "E.E.C." DRY CELLS—TRY THEM.

ZINC BATTERY PLATES.

<table>
<thead>
<tr>
<th>Size</th>
<th>$in. Thick.</th>
<th>$in. Thick.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1½in.</td>
<td>3/4</td>
<td>1/2</td>
</tr>
<tr>
<td>1½in.</td>
<td>3/4</td>
<td>1/2</td>
</tr>
<tr>
<td>1½in.</td>
<td>3/4</td>
<td>1/2</td>
</tr>
</tbody>
</table>

Zinc for Bichromates, see page 17.

STONWARE BATTERY JARS.

Specially Strengthened to Stand Acids. Inside Measurement:

<table>
<thead>
<tr>
<th>Size</th>
<th>£1 pint</th>
<th>£2 1/2 pint</th>
</tr>
</thead>
<tbody>
<tr>
<td>3½in.</td>
<td>6/6</td>
<td>10/6</td>
</tr>
</tbody>
</table>

Zinc for Bichromates, see page 18.

SPECIAL IMPROVED LECLANCHE CARBONS

Solid Carbons with Brass Terminal. Creeping impossible with this pattern (recommended).

List No. 179 2½in. Plate 1/6 3/6

1½in. 3/6 7/6

1½in. 3/6 7/6

Postage 1/6, and 2/6, extra.

POROUS POTS (EMPTY)

Outside Measurement:

<table>
<thead>
<tr>
<th>Size</th>
<th>£1 pint</th>
<th>£2 1/2 pint</th>
</tr>
</thead>
<tbody>
<tr>
<td>3½in.</td>
<td>6/6</td>
<td>10/6</td>
</tr>
</tbody>
</table>

BATTERY CHEMICALS.

Salammoniac, Bichromate of Potassium, Sulphate of Copper, Paraffin Wax, Bichromate of Potassium, Crushed Carbon (no Rubbish), Persulphate of Manganese, etc., etc.

Dioxyd, Special for Dry Batteries, Mercury per oz...

SPECIAL CHROMIC ACID.

In Sealed Glass Bottles. A Special Preparation of Bichromate of Potassium and Sulphuric Acid in Powdered Form. Directions on each Bottle for Charging Bichromate Batteries. We strongly recommend.

List No. 180 Each 1/9, weight 2lbs. Postage 10/6, and 15/6 extra.

GR AVITY DANIEL CELL.

Complete three pieces. List No. 181. Each as illustration. 10/6 Postage 3/6 extra.

For other Batteries, see pages 7, 15, and 55 in Catalogue.

A PROMPT SERVICE AND QUICK DESPATCH IS SURE FROM LONDON.
Telegrams—ECONOMIC, Twickenham

Registered Telegraphic Address: "ECONOMIC," Twickenham.

MINIATURE BRASS LAMP HOLDERS, ADAPTORS, &c.

Bayonet Lamp Holders we stock in two sizes, 6d. and 4½d. As a rule the 6d. size is required for Battery Lamps. Improved Pattern with neat finish in old gold colour. The sockets are evenly and carefully cut. Screw holes finished with good, sharp threads. That's where we score!

No. 203. Loop Lamp Holders (as illustration) 6d.
No. 204. Plain Bayonet Holders 5½d.
No. 205. Bayonet Holder, with Shade Carrier only 5½d.
No. 206. with Cord Grip Shade Carrier (as illustration) 6½d.
No. 207. Batten Holders (as illustration) 6½d.
No. 208. Miniature Adaptor for above Holders 5½d.
No. 209. Tumbler Switches, brass covers 6½d.
No. 209a. Key Switch, Quick Break (Plated) 9½d.

MINIATURE TWO-PIN PLUGS.

As illustration, splendidly finished. Made from special Marblinc in red, white and silver, grey, &c. Suitable for all interiors. Very effective and reliable. Size ½ high by ½ diam. Each 1½d. One way (as illustration) List No. 0102. Exact as illus.

MINIATURE SCREW LAMP HOLDERS.

To fit ordinary Pocket Lamp Bulbs of 2 or 4 V. Min. Screw Orames (½ cap). List No. 0173. Each 4½d. Postage ½d. extra.

REFLECTORS.
The very latest cheap reflector on the market. Fits tiny miniature S.B.C. holders. They look neat and reflect a powerful light.

THE LATEST SHADE.

Miniature size to parts ½. S.B.C. holders supplied crinkled (as illustration) with edges in red, pink, yellow and white. Very effective when used with Metal Filament Lamps. 3½ in. diam. by 4½ in. high. List No. 0053. Each 7½d. Postage 3½d. extra.

BUY DIRECT AND OBTAIN GOOD VALUE.
SHADES, BRACKETS, HANGING-LAMP SETS.

List No. 214.

List No. 217.

List No. 216.

Each

214. Handsome Solid Brass 6in. Swan-necked Wall Bracket, fitted with Best Quality Fancy Crinkled Opal Shade (without Lamp) ... 1/4

No. 214, fitted with Carbon Lamp, 7d. extra; with H.E. Lamp, 10d. extra; or with "Ego Metal Filament Lamp, 2, 4, 6, or 8 Volts, 1/3 extra. Plate 3d. extra.

215. Complete Set (as illustration), mounted on Handsome Polished Wood Base. Complete, with One-Way Nickel-Plated Switch, 2 Battery Terminals, One 6-inch Solid Brass Lacquered Bracket, Fancy Opal Shade (without Lamp, otherwise as Illustration) ... 2/3

No. 215, fitted with Carbon Lamp, 7d. extra; with H.E. Lamp, 10d. extra; or with "Ego Metal Filament Lamp, 2, 4, 6, or 8 Volts, 1/3 extra. N.B.—We can supply Nos. 214 and 215 with No. 068 Fancy Shade at 4d. extra. Plate 4d. extra.

216. Handsome Wall Fitting for Loop Lamps, Complete, ready wired and Reflecter (without Lamp, otherwise as illustration) ... 1/4

No. 216, fitted with Carbon Lamp, 6d. extra; with H.E. Lamp, 9d. extra; with "Ego Metal Filament Lamp, 4, 4, 6, or 8 Volts, 1/2 extra. Plate 5d. extra.

217. Complete Hanging Lighting Set (as illustration), fitted with 3ft. Twin Silk Flexible Wire, One Nickel-Plated Powerful Reflecter, Polished Brass Bayonet Holder, Shade Carrier and Cord Grip, and Selection 2-in. Polished Wood Rosette ... 17

No. 217, fitted with Carbon Lamp, 6d. extra; H.E. Lamp, 10d. extra; or "Ego Metal Filament Lamp, 2, 4, 6, or 8 Volts, 1/3 extra. Plate 6d. extra.

N.B.—No. 217, we can supply with No. 068 Fancy Coloured Shade, 4d. extra.

220. 3in. Nickel-Plated Shade to fit above Holders, S.B.C. ... 1/4

221. 3in. Handsome Crinkled Glass Opal Shade (as illustration) ... 1/4

068. 6in. by 44in. High Fancy Shade, tinted at edges with Pink, Red or Yellow or Frosted White. Exceptionally Handsome Fitting, ... 8

Plate 3d. extra.

222. Hanging Lighting Sets with 2 Lights, with Shades, &c. (without Lamps) 3/9

223. " " " " 3 " " " " " 5/3

224. " " " " 4 " " " " " 6/3

225. " " " " 5 " " " " " 8/1

Plate 3d., 4d., 6d. extra.

* Fitted with Carbon Lamps, per light, 7d. extra; with H.E. Lamps, per light, 10d. extra; or with "Ego Metal Filament Lamps, per light, 2, 4, 6, or 8 Volts, 1/3 extra.

COMPARE THESE PRICES WITH RIVAL COMPETITORS.

Section B.

THE "ECO" METAL FILAMENT LAMP.

(VALUE FOR MONEY.)

The "Eco" Metal Filament Lamp is the Latest Production of the "Economic," and is sold under the special guarantee of that name. By purchasing direct from the Company, you have the advantage of getting the genuine "Eco" at the Rock-bottom Price. EFFICIENCY 1 WATT PER CANDLE POWER.

INCANDESCENT ELECTRIC LAMPS.

(CARBON FILAMENT.)

The Lamps sold are genuine E.E.C. High Vacuum Lamps for lighting from Batteries, Dynamo, or Accumulators. The carbon filament is carefully manufactured and supported. By our process almost a complete vacuum is obtained with these Lamps.

N.B.—On grounds of ECONOMY we strongly advise the use of H.E. Lamps (H.E. stands for High Efficiency) that is, takes small current to light, where lighting by accumulators. They consume about three quarters less current than the ordinary, and give approximately three candle-power.

PEA LAMPS.

Voltage 9, 3, 4 Voltage 2, 3, 4, 5, 6, 7 & 8 Volts or 8 Volts.


/6 /6 /6 /6

5/6 /6 /7 /6

9/6 /7 /9 /3

10/6 /11/6

10/6 /11/6

10/6 /11/6

PEA SHAPE.

English, H.E. lamps for Interns. 2 to 15 Volts.

Each, 1/3.

COLOURED LAMPS, 1d. each extra. Colours—Blue, Green, Red, Yellow, &c.

STAINS for customers to colour their own Lamps, in assortment as above, 6d. per bottle.

Above Capped Lamps, are for 1/2 Ref. (Small Bayonet Cap); if wanted for 1/2 H.E.C. add 2d. on above prices.

PRICE RIGHT—LIGHT RIGHT—that's the new "Eco."
"OSRAM"

METALLIC PATENT FILAMENT.
The recognised Supply House for Battery "Osram." We hold one of the largest and most varied stocks in the Country. In addition to important improvements, we have recently added several new patterns to our already large stores. MAKE SURE. Buy direct from us. GUARANTEED GENUINE.

M.B.E.C.—Miniature Small Edison Screw, 1 size
S.B.C.—Small Edison Screw, 1 size
L.B.C.—Small Bayonet Cap, 1 size
M.I.N.I.A.T.U.R.E S.B.C.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Candle Power</th>
<th>Volts</th>
<th>Amps</th>
<th>Each</th>
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<tr>
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Postage Id. extra.

N.B.—Above Bulbs suitable for any of our Pocket Lamps.

ROUND BULBS S.B.C. or LOOP.

<table>
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<th>Each</th>
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<tr>
<td>877</td>
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Postage Id. extra.

PEAR SHAPE L.B.C., S.B.C. or LOOP.

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<tr>
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<td>12</td>
<td>1</td>
<td>2/3</td>
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<td>893</td>
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<td>25</td>
<td>5</td>
<td>3/6</td>
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Postage 2d., and 3d., extra to size.

N.B.—Osram Pear Shaped must be used in a hanging position straight down as illustration.

ROUND BULBS, S.B.C.

<table>
<thead>
<tr>
<th>List No.</th>
<th>C.P.</th>
<th>Volts</th>
<th>Amps</th>
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<td>75</td>
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<tr>
<td>836</td>
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</tr>
<tr>
<td>837</td>
<td>6</td>
<td>8</td>
<td>75</td>
<td>2/6</td>
</tr>
</tbody>
</table>

Postage 2d., each extra.

THE POWERFUL "TRACTION" MOTORS.

A Special Design embodying great power with very heavy and substantial construction. The illustration does not do justice to the machine, inasmuch that it is fitted with standard bearings, massive self-starting Tri-polar Armature of 2in. diameter. The weight, 3bfl., will give some idea of the machine's proportions. Finished in Chocolate Enamel with Nickel-plated Screws, etc., this motor has very handsome appearance. Size 3bfl. long, 4fl., wide, 4fl., high.

List No. 932. EACH 12/6. Postage 1/2.

Or with Special cog gear to produce more power.

EACH 21/2. Postage 1/2.

THE "LITTLE LOCO" MOTOR.
The "Little Loco" is invaluable to the amateur, equipping his Electric Loco, Launch, or Team Car. It is a decided advantage to have the right kind of motor to do the work. Several types in stock, total weight 2ozs. For this reason we maintain there is nothing on the market to equal its power. Self-starting Tri-polar Armature, 2in., diameter.

COMPLETE MOTOR 2 List No. 801 COMPLETE SET OF PARTS 2 Postage 2d., extra.

OSRAMS FROM "E.E.C." are genuine.
THE "BRITISH" DYNAMOS.

SEVERAL unique and important improvements have recently been introduced into the latest built "BRITISH" Dynamos. They are the outcome of ACTUAL TESTS, and among Manufacturers hold a high standing for Substantial Construction, Efficiency, and Symmetrical Design. Our ANNUAL SALE for these Machines last season was OVER 300. You will find "BRITISH" Dynamos in all quarters of the Globe accepted and given our Customers that entire satisfaction which can only result from a perfect Machine.

A FEW PARTICULARS.

"BRITISH" Dynamos, with Drum Armatures, can be used for Electric Lighting, Accumulator charging, Electric-Plating, or will run as powerful Self-starting Motors. H Armatures can only be used for Electric Lighting or as Motors.

A SET of Castings include Massive Field Magnets and Rotor Plates, Brush Holder and Pulley.

A SET of Castings, Wire and all Materials, include Fields and Rotor Plate, Anodized Stamping, Terminal Screws, Bolts, Commutator Materials, Pulley, Copper Gauze, Brush Holder and Brush Holders, and pair of Bearings, together with correct gauge and quantity of Wire for Armature and Fields.

If you can afford TYPE B, so much the better. Of course it is the best Machine, although TYPE A is capable of much useful work and is guaranteed to give the utmost as fitted.

NOTE.—Both A and B types are Shunt Wound. We can supply Series Wound same price. Compound Wound, add 10 per cent, extra.

WEIGHT.—BRITISH DYNAMOS, RELIABLE POINTS ARE MODERATE PRICE.

SPECIFICATION.

TYPE A.
Armature.—Best Annealed Laminated Stamping.
Field.—Massive Design in Soft Grey Iron.
Pulley.—Can use either Round or Flat Belt.
Commutator.—Hard Metal, mounted on Velveteen Fingers.
Bearings.—Gunmetal, extra long life.
Brushes.—Copper Gauze, Spring Contacts.
Insulation.—All Winding two coats Shellac.
Finish.—Glory Green Enamel.
Winding.—Ribbon Wires on all Armatures.

TYPE B.
Armature.—Best Annealed Laminated Stamping.
Field.—Massive Design in Soft Grey Iron.
Pulley.—Can be used for Round or Flat Belt.
Commutator.—Carefully built up Copper Commutator Sections, well Insulated, substantial depth of Copper to allow for wear and turning when Commutator gets worn.
Bearings.—Automatic Oil Rings are fitted, which ensure the Machine being efficiently lubricated. Capable of continuous running without attention, fitted with Gunmetal, the Bearings are the whole set-off with these Machines.
Brushes.—Gunmetal Adjustable Rocker, Copper Gauze Brushes, Spring Contacts.
Insulation.—All Winding two coats Shellac.
Terminals.—Massive, and mounted on Polished Wood.
Finish.—Glory Green Enamel.
Specially designed for Hard Continuous Running, either Charging Accumulators or Lighting. Fitted with Disc Stud Commutator or ordinary round pattern as in British Dynamos, with Brush Rocker actuating, state type preferred. This type of machine stands distinctly alone from all others. It is one of the most efficient electrical generators; it is possible to obtain, principally on account of its built in magnetic circuit. Fitted with Spring Copper Gauze Brushes, Automatic Feed—valuable under any conditions, a carefully wound & Polished Drum Armature, extra LONG GUN-METAL BEARINGS, Flat (which may be used as a V) Pulley, Shunt Wound, Massive Field, cast in Soft Grey Iron. Perfect finish in Glossy Green Enamel. Price includes all Wires. Castings only include Fields, Pulley and Bearings.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Output Volts 32</th>
<th>Output Amps</th>
<th>Candle Power</th>
<th>Speed per Minute</th>
<th>Size of Armature</th>
<th>Approximate H.P. per drive</th>
<th>Fitted with 3 Pole Armature</th>
<th>Castings, Wire, and all Materials A.</th>
<th>Castings only.</th>
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<tr>
<td>904</td>
<td>10</td>
<td>31</td>
<td>30</td>
<td>2,500</td>
<td>1 1/2</td>
<td>18 1/2 b.h.p.</td>
<td>2</td>
<td>32 1/2</td>
<td>32 1/2</td>
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<td>45</td>
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<td>18 1/2 b.h.p.</td>
<td>2</td>
<td>32 1/2</td>
<td>32 1/2</td>
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<td>906</td>
<td>20</td>
<td>51</td>
<td>45</td>
<td>2,000</td>
<td>2 1/2</td>
<td>18 1/2 b.h.p.</td>
<td>2</td>
<td>32 1/2</td>
<td>32 1/2</td>
</tr>
</tbody>
</table>

Carriage forward. N.B.—Any of our Dynamos are prepared to wind for special orders to suit customers' requirements. Write us your enquiries.

THE "O.T." DYNAMO.

To the Amateur with Lustful Pocket our latest O.T. Dynamo is distinctly fascinating. Everyone obtaining our latest Catalogue, we are perfectly aware, cannot afford £1 or £2 or £3, and are more likely to be looking for a Dynamo in quantities, and by that method shall supply the Amateur with a useful little Machine at a VERY LOW COST. The illustration is from a recent photo, of the O.T. Dynamo. It develops 5 Volts 1 Amp, and is fitted with 4 Pole H.M. Copper Drum Armature, Moving Brush Rocker, Spring Brush Holders on Pulley, or Flat if required, and a shaft Commutator, height 5 in., width 4 in., length 5 in. outside of pulley, weight approx. 4 lbs. From ACTUAL TEST! at works the O.T. Dynamo will charge 3 of our well-known O.T. Accumulators in about 10 hours or brilliantly light £4 3s. c. per List No. 36.

93 EACR Ld., With 8 pole armature.
92 EACR Ld., With 4 pole armature. Postage £3 extra. Castings only £9.75 per set, Postage £3.60 extra.
94 Complete Set of Castings, Wire and all Materials for 8 pole Armature, $25; postage 63. extra.
95 Complete Set of Castings, Wire and all Materials for 8 pole Laminated Armature, machine ready for winding, the complete set £9.60.

We hold one of the LARGEST STOCKS OF DYNAMOS IN LONDON. It is possible that we can satisfy any order you may have.

FULL OUTPUT OF ALL DYNAMOS GUARANTEED.

"The "BRITISH-MADE COLONIAL" DYNAMOS.

ILLUSTRATIONS of the "British-Made Colonial" Dynamos are produced from recent photos. Your attention is directed to several interesting features. The Design of Fields—magnetically this is, correct, being a massive casing in one piece, therefore no magnetic leakage. The AIR GAP is at a minimum providing for the Machine's efficiency. The Tunnel is proportionately long, and the Armature well balanced. Binding Wires are used on all Armatures. Strictly speaking, it is RELIABLE, it must be capable of Hard Continuous Running without attention, and it will OUTPUT ABSOLUTELY CORRECT at the speeds listed. Remember it is on those conditions you select, and we supply a "Colonial.

SPECIFICATION.

BEARINGS—Long Gunmetal Automatic Feed Ring Lubrication.

FIELD—One Massive Soft Grey iron Casting.

ARMATURE—Laminated Stamping, go to the inch, each Stamping Shell is varnished.

PULLEY—In sizes 250 to 94, can be used either 25 or 35.75.

COMUTATOR—Of ample proportion, built up from hard copper and carefully insulated, sufficient depth of metal is left for turning when Commutator gets worn.

BRUSH GEAR—Simple and substantial Spring Holders and Copper Gauze Brushes.

FINISH—Glossy Holly Green Enamel, Winding, costs of Shells, all metal parts polished.

OUTPUT—Guaranteed as speeds listed.

It's ENGLISH throughout, therefore if you are a Colonist of any country, you obtain the advantage of Preferential Tariffs in your own Colony.

THE "TURBINO" CHARGING DYNAMO.

From recent photo, of List No. 92.

It is Castings and all materials are machined ready for winding. Price includes all Wires. Castings only include Fields, Pulley and Bearings.

"COLONIAL" DYNAMOS are made for heavy work.
THE "E.E.C." CHARGING DYNAMO.

The Machine illustrated is from a recent Photo of our Latest "E.E.C." Charging Dynamo, specially designed for Amateurs requiring a Reliable Generator taking small power for House Lighting or Accumulator Charging. The Machine is capable of being run continuously at high speeds with very little attention. THE OUTPUT is 8 Volts 750 Amps at 5,000 Revs per minute and is guaranteed absolutely accurate. Each individual Dynamo is tested for 2 hours, all its GUARANTEED output before leaving our works. There can be no question of "will it work?" You may rest assured if you place your order for one of these Machines it will do what we say. The Dynamo is Shunt Wound, fitted with 8 pole Copper Armatures, built up from 1½ inch Best Charcoal Commutator Stamping.

Special 8 Section Commutator, an improvement to that illustrated, thick disc pattern, or round drum pattern if preferred.

Copper Gauze brushes. Massive Field Castings and carefully insulated windings.

Weight 6½ lbs. Height 4½ ins. by 8½ ins. by 8½ ins. suit able to work with our 1½ H.P. Gas Engine.

List No. 927 Each 15s.

Carriage Paid 8d. extra.

At 3,000 revs. it gives 6 volts 3½amps.

" 2,000 " 6 " 4½ "

" 3,000 " 4½ "

" 4,000 " 3½ "

" 5,000 " 2½ "

Requires ½ H.P.

Driven as a Motor it runs quietly and is well adapted to drive small Machines, Phonographs, etc., will charge two 4½ volt Amm. Inc. Accumulators comfortably without undue heating, or light 4½ volt 6 amp. candle power, Metal Filament Lamps brightly.


No. 928 3 ½ to 1½ 11½ ½ 1½ 2 1½ 2½ 15½

No. 929 4½ to 1½ 1½ ½ 2½ 2½ 2½ 2½ 1½

No. 930 5½ to 1½ 1½ ½ 3½ 3½ 3½ 3½ 1½

Bored (as illustration), any size hole drilled and fitted with helicoid lubricator, double above prices.

Illustration 2½ ins. size.

Brush Holders.

Drilled and fitted with adjustable Screw Centre Hole ½ ins. for contact spindle.

List No. To take Brush Ea. Castings only 926 ½ ins. wide 927 ½ ins. high 928 1½ ins. wide 929 1½ ins. high 930 Postage 7½ and 2 extra.


927 ½ ins. long by ½ ins. wide 928 ½ ins. long by 1½ ins. wide 930 ½ ins. long by 1½ ins. wide 935 Any size made to order at moderate price. Copper Gauze to make own brushes, 4½ ins. wide. Special Silver Steel Shafts.

In 2½, 3½, 4½, 5½, 6½ ins. diam. ½ ins. long, 1½ ins. long, 1½ ins. long.

List No. 927.

LET IT BE KNOWN "Economic" for Moderate Prices.
### THE "MODEL ENGINEER" DYNAMO PARTS.

**CLEAN CASTINGS. NO TUNNEL BORING NECESSARY.**

If you are an Amateur on the look-out for a useful Set of Dynamo Castings and Materials easily fitted together, and giving most satisfactory results, you can with confidence pass your Order to us. With each complete Set of Parts we include No. 10 Handbook of "M.E." Series Secret, Dynamo and Motors—How Made and Used. This book comprises 70 pages, and fully describes with detail measurements, diagrams, and illustrations, how to build up these useful Generators, and, when finished, how to run them. Few Tools are necessary, and nothing could be more concise and practical than the instructions.

#### Table of Parts

<table>
<thead>
<tr>
<th>List No.</th>
<th>Volts</th>
<th>Amps</th>
<th>Candle Power</th>
<th>Armature Length</th>
<th>Armature Diameter</th>
<th>Complete Set of Castings, Wire, and all Materials</th>
<th>Field Magnet (Only)</th>
<th>Field Magnet Weight on Armature</th>
<th>Finished Weight of整个 Armature on Filler</th>
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<td>15.0</td>
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<td>43.5</td>
<td>65.6</td>
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<td>27</td>
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N.B.—Candle quoted from actual tests when using Metal Filament Lamps.

A Set of Castings, Wire, and all Materials includes Massive Field Magnet (see weights above), Gunmetal Bearings, Steel Shaft, sufficient Laminated Armature Stampings (see cheeseparing), ample supply of both Armature and Field Wires, Brush Holders and Rockers, Copper Gasket for Brushes, Commutator Parts, Pulley Castings, all Insulating Materials, together with Spring Wire, Nut, Screws and Tornails.

**NOTE.**
We can cast from Customers’ own Patterns. Patterns made promptly from Sketches or Reasonable Prices.

**STEEL SHAFTS FOR DYNAMOS.**
Cut to any length, not polished.

<table>
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<tr>
<th>per foot</th>
<th>1/4</th>
<th>1/2</th>
<th>3/4</th>
<th>1</th>
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<tr>
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<td>1</td>
<td>3/4</td>
<td>1</td>
<td>3</td>
<td>5</td>
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</tbody>
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**SMALL TESTING COMPASS FOR DYNAMOS.**
Each 2/6. Postage 1/3 extra.

**GREASE LUBRICATORS FOR DYNAMOS.**
No heat bearings when using these Lubricators.

<table>
<thead>
<tr>
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<th>Diam.</th>
<th>Thread</th>
<th>Each</th>
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<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
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<td>6</td>
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</tr>
<tr>
<td>1310</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

**DYNAMO REPAIRS.**
Re-winding Armatures and Fields, New Commutators, Bearings, Brushes, &c.

<table>
<thead>
<tr>
<th>We can give you low quotation for this class of work.</th>
<th>1313</th>
<th>1314</th>
<th>1315</th>
<th>1315a</th>
</tr>
</thead>
<tbody>
<tr>
<td>1313a</td>
<td>1313</td>
<td>1314</td>
<td>1315</td>
<td>1315a</td>
</tr>
</tbody>
</table>

**DYNAMO PULLEYS.**
Turned and Finished with Screw, can be used Flat or V.

<table>
<thead>
<tr>
<th>List No.</th>
<th>Diam.</th>
<th>Length</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>1316</td>
<td>6</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>1316</td>
<td>6</td>
<td>15</td>
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</tr>
<tr>
<td>1316</td>
<td>6</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

**SPECIAL CUT-OUTS FITTED WITH OUR DESIGN TO ORDER.**

---

### THE "E.E.C." SPECIAL REGISTERED CUT-OUTS.

In the past we have received many enquiries for an efficient and moderate-priced Automatic Cut-out. Actual Tests have been made on several of our Customers’ requirements, from which many important details have resulted. Taking all the suggestions as a whole, and having carefully considered each individual point, we have produced and registered a Cut-out of some considerable merit for Efficiency, Reliable Action, and Moderate in Price. The illustrations produced below are taken from actual photos, which in themselves render a lengthy explanation unnecessary.

**ADJUSTABLE AUTOMATIC CUT-OUTS FOR ACCUMULATOR CHARGING.**
List No. 938—943 are cut out only. | List No. 944—951 are cut-out and cut in.

#### Type A.
Fitted with Spring Contacts and wound with Series and Shunt Coils. Action.—Immediately dynamo voltage falls to that of cells the armature of Automatic Cut-out is magnetically released, breaking accumulator connection, and leaving dynamo on open current. This operation is absolutely automatic and guaranteed at voltage listed.

**Type A.**

<table>
<thead>
<tr>
<th>List No.</th>
<th>Can be adjusted to cut out at or between</th>
<th>Current, Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>938</td>
<td>4 to 5 volts</td>
<td>3 amps</td>
</tr>
<tr>
<td>939</td>
<td>6 to 8</td>
<td>4</td>
</tr>
<tr>
<td>940</td>
<td>8 to 10</td>
<td>5</td>
</tr>
<tr>
<td>941</td>
<td>10 to 15</td>
<td>6</td>
</tr>
<tr>
<td>942</td>
<td>15 to 20</td>
<td>7</td>
</tr>
<tr>
<td>943</td>
<td>20 to 30</td>
<td>8</td>
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</tbody>
</table>

**Type B.**

<table>
<thead>
<tr>
<th>List No.</th>
<th>Can be adjusted to cut out at or between</th>
<th>To carry, Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>944</td>
<td>4 to 6 volts</td>
<td>6 amps</td>
</tr>
<tr>
<td>945</td>
<td>6 to 8</td>
<td>8</td>
</tr>
<tr>
<td>946</td>
<td>8 to 10</td>
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<tr>
<td>947</td>
<td>10 to 15</td>
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<td>948</td>
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<td>949</td>
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<tr>
<td>950</td>
<td>30 to 50</td>
<td>75</td>
</tr>
<tr>
<td>951</td>
<td>50 to 100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Postage 3d. to 6d. extra.**
THE ECONOMIC ELECTRIC CO.  
316 P.O. Richmond  
Economic, Twickenham

"E.E.C." ARMATURE STAMPINGS.

MANUFACTURED from the best possible Charcoal Sheet Iron, annealed by Special Process. About 50 Stampings to the inch. NOTE:- The Slita and Centre Holes are clean cut and regular, not pushed through as in the cheaper varieties sold by some firms.

SAMPLES.

To aid you in obtaining the genuine article, and in a measure to stamp out fraudulent imitations, we have decided to forward samples of any type "E.E.C." Stamping on receipt of two l/10 stamps.

Before building your Dynamo or Motor CALL OUR OWNERSHIP" of the above OFFER!

NOTE COMPETITIVE PRICES.

<table>
<thead>
<tr>
<th>Diam. in inches</th>
<th>Hole in Centre</th>
<th>Price for gross per gross</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>1/4</td>
<td>5/3</td>
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<td>1/6</td>
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<td>1/8</td>
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<tr>
<td>1/5</td>
<td>2/10</td>
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N. SIEMENS.

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TRI-POLAR.

<table>
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<tbody>
<tr>
<td>1/8</td>
<td>1/11</td>
<td>5/3</td>
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<tr>
<td>1/9</td>
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<tr>
<td>1/11</td>
<td>1/14</td>
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POLE COGGED DRUM.

12 POLE COGGED DRUM.

<table>
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<th>Diam. in inches</th>
<th>Hole in Centre</th>
<th>Price for gross per gross</th>
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<td>1/5</td>
<td>2/10</td>
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16 POLE COGGED DRUM.

<table>
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<tbody>
<tr>
<td>1/8</td>
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<td>1/11</td>
<td>1/14</td>
<td>8/8</td>
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</table>

POLE COGGED DRUM.

6 POLE ALTER.

<table>
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<th>Diam. in inches</th>
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<tbody>
<tr>
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<td>1/9</td>
<td>1/12</td>
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<td>1/11</td>
<td>1/14</td>
<td>8/8</td>
</tr>
</tbody>
</table>

POLE COGGED DRUM.

8 HOLE DRUM.

<table>
<thead>
<tr>
<th>Diam. in inches</th>
<th>Hole in Centre</th>
<th>Price for gross per gross</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>1/11</td>
<td>5/3</td>
</tr>
<tr>
<td>1/9</td>
<td>1/12</td>
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<td>1/10</td>
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<td>7/6</td>
</tr>
<tr>
<td>1/11</td>
<td>1/14</td>
<td>8/8</td>
</tr>
</tbody>
</table>

N.B.—You can get the correct count from the "Economic" chart. Postage extra on all Stampings.

ANNUAL SALE OF STAMPINGS 5,000 GROSS.

THE ECONOMIC ELECTRIC CO.  
316 P.O. Richmond  
Economic, Twickenham

COLONIAL OPINION.

Summer Hill, Sydney, N.S.W.

Dear Sirs,

Some time ago I ordered some small armature stampings of yours and I may say they have given every satisfaction. I was very surprised at the prompt attention my small order received. Please forward your very supplement, I hope to place a large order with you in the near future.

Yours faithfully,

N. DENHAM.

AUSTRALIANS KNOW!

SPECIAL ORDERS.

If you can take, say, 10 gross lots, we can quote you very low prices.

We can quote for any sized stampings, slot or centre hole, but we ask customers to remember that this means special tools, and consequently prices are somewhat advanced to the stock sizes.

POSTAGE extra on all stampings, usually 5d to 6d per gross.

THE "E.E.C." RHEOSTAT.

Made to order for any voltage, but stock size (1½ volts). Can be used for Dynamo, Accumulator Charging, or reducing Current from supply mains, for driving small motors, tramcars, etc. On Polar Frame, China Insulators, 11 Way Switch (as illustration). Size ½ by ½ in. List No. 4057. Each (any Voltage) 10/-. POSTAGE 10/.

MAGNETIC COMPASS.

Useful and Reliable Instruments for locating in which direction an Electric Current is flowing, or defining Polarity of Dynamo, Motors, etc. Fits wadcoat pocket, very compact.

List No. 649. Silvered Divided Dial, Stopper Needle, Spring Case, similar to watch. Hunter Pattern, Nickel-Plated, Splendid Finish.

List Nos. 615, 616, 620, 625. DIAMETERS. 2½ in., 2½ in., 2½ in., 2½ in., 2½ in. POSTAGE 6d.

NICKEL PLATED COMPASS, MARKED DIAL.

List No. 648. Blue Steel Needle, Diam. ½ in. POSTAGE 6d.

BRASS CASED COMPASS, WITH BRASS CAP.

List No. 646. Diameter 1½ in. 1½ in. 1½ in. POSTAGE 1½d.

B.E.C. ALWAYS POINTS TO MODERATE PRICES.
E.E.C. GAS AND PETROL ENGINES.

The name E.E.C., coupled with over 12 years' wide manufacturing experience, give the customer that assurance so necessary in dealing with firms by mail. It is a guarantee that the Engines are constructed on up-to-date lines and supplied at a REASONABLE PRICE. From cylinder to flywheel the E.E.C. Engines are mechanically sound. Constructed for Continuous Running under normal load conditions, beyond occasionally oiling it will require NO SKILLED ATTENTION. More convincing from our standpoint would be a personal call, Customers could then examine and test the different Engines under working conditions.

**List No. 0107.**


**PRICE:** £3 0 0

Car. Forward.

**List No. 0108.**

1 B.H.P. Otto Cycle (as illustration on page 105), 2 in. Bore. 3 in. Stroke. Water Cooled, Piston fitted with two Spring Rings to assure high compression, Balanced Steel Crank, diam. of Flywheel 10 1/4 in., Weight 7 lbs., with 1 1/16 in. face, Lubricator to Cylinder, Tube or Electric Ignition, complete with Gas Bag and Water Tank, Length of Bed, 15 in. by 8 3/4 in., Speed 500 revs. per min., Weight of Engine 45 lbs., Cost of running, 3 hours for one penny, Electrical output, 60-70 watts. Using Petrol this Engine will develop 1 B.H.P. actual.

**PRICE:** £4 15 0

Car. Forward.

**List No. 0109.**


**PRICE:** £9 15 0

Car. Forward.

We supply High-speed Trembler Coil 20 amp. hr. Accumulator Surface Carburettor, with Copper Pipes, Bixing Valve, Hot Air Pipe, Drain Cock to Tank, Unions, Sparking Plug, &c., to any of the above Engines for Petrol. To run Engine approx. 4 hours without filling tank, 1 1/2 B.H.P. 48½, extra on above prices, or with 3 dry cells instead of accumulator, 30½.

1 1/2 B.H.P. 51½.

High-speed Trembler Coil for above Engines 19½ each. 20 amp. hr. Accumulator, 12½ each.

E.E.C. ENGINES ARE MADE BY ENGINEERS.

**COMPLETE “E.E.C.” CHARGING AND LIGHTING PLANTS.**

For Amateurs, Country House Lighting, or Cycle Agents’ Accumulator Charging Installations. The Complete Sets listed will be found thoroughly reliable, up to their work, and give general satisfaction to any purchaser.

For Engine Particulars, see page 42. For Dynamo Particulars see pages 31-35.

Running
Cost
4d. per hour.

Output
15
Vols.,
5
amps.

From photo of List No. 0105. 1 B.H.P. Set.

**List No. 0103.**


**COMPLETE:** £3 15 0

Car. Forward.

Special “E.R.C.” Switchboard for above, comprising 0-12 Voltmeter, 0-6 Ammeter, Switch Fuse, Charging and Dynamo Terminals. Each 13½.

**List No. 0104.**

1 1/2 B.H.P. Gas Engine, supplied with everything ready for running, together with our 15 Volt, 5 Amp. “Colonial” Dynamo, including 3 in. Belt.

**COMPLETE:** £3 16 0

Car. Forward.

**List No. 0105.**

1 1/2 B.H.P. Gas Engine (as illustration), mounted with our 15 volt 5 amp. “Colonial” Dynamo, everything complete and compact (Water Tank and Gas Bag contained in Bed).

**COMPLETE (as illustration):** £9 10 6

Car. Forward.

Switchboard for List No. 0104 or 0105, comprising 0-25 Voltmeter, 0-6 Ammeter, Switch Fuse, Charging and Dynamo Terminals. Each 23½.

**List No. 0106.**

1 1/2 B.H.P. Gas Engine, everything tested and ready for immediate use, together with our 30 volt 6 amp. “Colonial” Dynamo.

**COMPLETE:** £3 5 6

Car. Forward.

Switchboard for 1 1/2 H.P. set, comprising 0-40 Voltmeter, 0-6 Ammeter, Switch, Fuse, Four 30 volt Lamps and Batten Holders, Accumulator and Dynamo Terminals, as described and illustrated on page 77 in our Catalogue, Each 30½.

WE CAN QUOTE FOR PETROL CHARGING SETS.
SMALL POWER MOTORS.

(SERIES WOUND.)

For driving Small Machines, Dental Lathes, Sewing Machines, Engravers, Fans, etc.

0114 1-50 100-120 200-250 4ths. £1 10 0 0 115
0115 1-50 100-120 200-250 6ths. £1 10 0 0 115
0116 1-50 100-120 200-250 8ths. £1 10 0 0 115

CURRENT CONSUMPTION.
1-50 at 2,000 revolutions per minute, 20 watts. 1-29 1,500 10 1-19 1,500

N.B.—We can quote LOW PRICES for any size up to 2 H.P.
Send us your enquiries.

SEMIELUCED SHUNT WOUND MOTORS.

033 1 100-120 200-250 250watts. £2 4 0 0 120
053 1 100-120 200-250 400watts. £3 12 0 0 120
063 1 100-120 200-250 650watts. £4 12 0 0 120

LOW-VOLTAGE FANS.

Current Consumption Low. Horse Power. Alternating. Suitable for Accumulators or Dry Cells, stocked for 4, 6 or 8 volts. List No. 0111, 4-Blade with Guard £1 10 0

Set of Dry Cells Export Type to run above fans for 200 hours. Complete set 14/9.

THE "ECONOMIC" WATER MOTORS.

Including Driving Pulley, 2 Nozzles for Speed and Regulation and Lubricators.

080 1-20 1,800 60lbs. £2 10 0 0 0110
081 1-25 1,800 60lbs. £2 10 0 0 0110
082 1-3 1,800 60lbs. £3 10 0 0 0110
083 1-4 1,800 60lbs. £3 10 0 0 0110

Carriage forward.

WE CAN QUOTE you for small petrol sets, air or water cooled, from £1 to 30 H.P. at right prices.

COLONIALS! WE KNOW WHAT IS REQUIRED AND SUPPLY IT.

THE "LITTLE DASH" MOTOR.

Speedy Little Model. Runs round at over 3,000 revs. per min. of one "Defiance" Battery, or reversing current you reverse rotation. The very latest and cheapest on the market.

Usual Price 1/6.
Special Low Price, 1/10 each.
Postage 3d. extra.
If sent with "Defiance" Battery.
Postage free 1/0.

Models this Motor will drive see pages 47, 48.

THE "FAVOURITE" MOTOR.

A favourite with all Amateurs, mounted on round Polished Wood Base, fitted with Tri-polar Self Starting Armature. All parts Nickel Plated, Runs well on 1 Volt.

3/3 each.
Postage 4d. extra.
Try our "Defiance" with this Motor, it will give you perfect results.

POWERFUL "LITTLE HUSTLER" MOTORS.

The powerful 2 Volt "LITTLE HUSTLER" Electric Motor which we illustrate on this page is a complete specimen of the latest electrical science and workmanship.

It is 3 inches high, finished in glossy black enamel, with nickel plated fittings supplied with Tri-polar Armature causing motor to start without assistance immediately current is applied. It will drive a 4-1/2 in fan at 3,000 revs. per min. and is also fitted with a removable pulley wheel for running models, etc. Without a doubt it is the cheapest, most powerful and best-finished motor on the market at the price.

List No. 314. 2 Volt "LITTLE HUSTLER" Electric Motor, packed in strong box 4 1/2 each.
Postage on Motor, 1d. extra.

LITTLE "HUSTLER" MOTOR PARTS.

Many of our customers prefer to manufacture their own motor. Our long experience in this line enables us to make them the offer of a good and reliable set of parts easily fitted up with only the aid of a screwdriver. All parts are turned, winding and fitting only necessary to complete an exact copy of the "LITTLE HUSTLER" Electric Motor as above. Packed in strong box, each set is sent with full printed instructions showing how to wind and assemble, also how to make a simple and cheap battery for driving. SUCCESS is assured to all who carefully follow instructions.

Mr. W. E. Cog writes—"Received Motor Parts last night, I wound and fitted together in less than an hour, and it works splendidly—Gosport, Hants."

N.B.—Originals of all Testimonials can be seen.

List No. 316. Complete Set of "LITTLE HUSTLER" MOTOR PARTS. The Set, 3/6 each.
316a Cheap Set of Motor Parts, box "Little Hustler," on Card, with Instructions 1/1.
316b Superior, 2d. extra, and parts for making a Battery Postage 3d. extra.

E.E.C. MOTORS FOR ALL PURPOSES.
THE ECONOMIC ELECTRIC CO.

THE "ECOON" MOTOR.
A splendid little Model, scientifically designed and manufactured from only the best materials. Fitted with Tri-polar SELF-STARTING Armature. Runs at 3,000 revolutions per minute off one "Delusion" Battery.

<table>
<thead>
<tr>
<th>Price (in strong box)</th>
<th>2/6</th>
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</thead>
<tbody>
<tr>
<td>With Dry Battery</td>
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<tr>
<td>Footage, Motor only, 54, extra; or with Battery, 6d. extra.</td>
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</tr>
</tbody>
</table>

THE "NAVAL" MOTOR.
Very Powerful Tri-polar SELF-STARTING Armature, made on up-to-date methods. Wound with High-Conductivity Copper Wire, and Mounted on Handsome Polished Base; Fitted Terminals, Pullies, &c.

Price (as illustration), 3/6.

Footage, 4d. extra.

THE "LONDON" FAN SET.
Comprises Powerful SELF-STARTING Motor, one 4in. Fitted Fan, 3-Blade Con-necting Flexible Wire, one E.E.C. Dry Cell, or on Richrome Battery, together with extra Pulley, so that Fan can be removed and Pulley used for driving Motors. This Set is subject to our usual strict test, and will be found absolutely RELIABLE.

Price of complete Set, including extra Pulley, 6d.
Footage, 7d. extra.

THE "STUDENTS" MOTOR.
An improved type of Motor, recommended expressly for Students about to take up Electrical Engineering.

The Motor is strong and made for a rough time. Runs well off 3 volts. Price, 3d.

Footage, 4d. extra.

THE "CENTRAL STATION" MOTOR.
An exact and perfectly accurate Model of the present day Motors in all Electric Light Stations.

Mounted on Handsome Polished Base, and entirely enclosed. Runs well from 4 volts. Cover can be removed to adjust or clean. This Motor is strongly recommended to Customers in search of a Gramophone Motor. It runs very silent, and for its size is very powerful. SELF-STARTING.

List No. 317. The "Central Station" Motor.

E.E.C. BOAT ACCUMULATORS FOR POWER.

SPEDY. POWERFUL. QUIET.
The Latest "E.E.C." Launch Motors.
The Latest "E.E.C." Launch Motors are specially designed for boat work and not, as many, adapted from old stock castings. Customers by carefully noting the illustrations can see that the weight is evenly distributed and at the bottom of the boat. In most older patterns the field windings are on top, consequently the boat is not so well balanced, Top Heavy of course being the most general objection. In posting us your order you will obtain genuine Launch Motor of the MOST POWERFUL PATTERN.

SPECIFICATION.
No. 955 is fitted with 3 pole Self-Starting Tri-polar Armature. Nos. 956 and 957 are supplied with 3 pole Capped Drum Laminated Armatures and fitted with 8 section Special Disc Commutators. All patterns are SELF-STARTING and have Spring Copper Brush Gear of reliable design giving an even and efficient pressure on commutator with least possible friction. Steel Shaft with a long gunmetal bearing, giving a WELL BALANCED ARMATURE, which will run free from overheating, developing its maximum power at 2,000 revs. per min. for hours. Fields and Armature are carefully wound and receive each two coats of shellac varnish, finished in glossy holly-green enamel, all bright parts polished and lacquered.

LIST No. 955 (as illustration), Weight 15 ozs., Size 5 ins. Long, 2 ins. Wide, 1½ ins. High, stock windings 4, 6, or 8 volts. Rsv. 2,000 per min. suitable for driving, 3½t. Launch or Electric Loco or Tramcar to 15 lbs. Current Consumption, 1½ amp. at 4 volts. Supplied with No. 1 propeller, coupling and flexible shaft. Diameter of Armature 1½ ins.

COMPLETE, with Laminated Armature

<table>
<thead>
<tr>
<th>EACH 8½</th>
<th>postage 4d.</th>
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<tbody>
<tr>
<td>7</td>
<td>4d</td>
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<tr>
<td>Castings only (with stampings)</td>
<td>THE SET 7½</td>
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<tr>
<td>5</td>
<td>4d</td>
</tr>
<tr>
<td>Castings, Wire and all materials, Lam. Armature</td>
<td>5½</td>
</tr>
<tr>
<td>4½</td>
<td>4d</td>
</tr>
<tr>
<td>Castings, Wire and all materials, Lam. Armature</td>
<td>5½</td>
</tr>
<tr>
<td>3½</td>
<td>4½</td>
</tr>
</tbody>
</table>

LIST No. 956 Weight 1½ 4ozs., Size 5½ ins. Long, 2½ ins. Wide, 2½ ins. High, stock windings 4, 6, 8, or 12 volts. suitable for Loco or Tramcar of 3½ lbs., or Launches up to 5½t. Current Consumption, 2 to 3 amps. at 4 volts, supplied with No. 2 propeller, flexible shaft and coupling. Diameter of Armature 1½ ins.

COMPLETE with 3 pole Laminated Armature

<table>
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<th>postage 6d. extra</th>
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<tbody>
<tr>
<td>14</td>
<td>5d</td>
</tr>
<tr>
<td>Castings only with Armature (Laminated)</td>
<td>8½</td>
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<tr>
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<tr>
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<tr>
<td>Armature (for winding)</td>
<td>11½</td>
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<tr>
<td>Machined Castings, Wire and all materials, Lam. Armature</td>
<td>7½</td>
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Worm and Cock Gears for above Motors, see page 46: Boat Accumulators, see page 45: Propellers, see page 46.

E.E.C. BOAT ACCUMULATORS FOR POWER.
THE "E.E.C." PETROL CHARGING and LIGHTING SETS.


List No. 1620. 3½ H.P. Water Cooled Petrol Motor, Cylinder dimensions 80 mm. by 80 mm., Spray Carburettor, Automatic Lubrication, Petrol Tank, Silencer, Water Tank, High Speed Tumbler Ignition Coil, 20 amp. hr. 4 volt Accumulator, Set of Spanners, Sparking Plug, Wires High and Low Tension, Switches, etc., mounted on Substantial Bed Plate and coupled to our List No. 299 Colonial Dynamo.

List No. Price Complete Set ... ... ... ... ... ... ... ... £30 10s. 1620. " Engine Carburettor, Fittings and Bed Plate ... £21 5s. N.B.—If you are in the Market for a Petrol Set give us an opportunity of quoting. We specially cater for Colonials wanting a useful set. Several of our combined plants are daily in use in India and New Zealand giving most satisfactory results. Spares for Engine and Dynamo always in stock. We can quote special prices for large or small sets.

THE "CRUISER" BOAT MOTORS.

Suitable for Locos or Boats. For efficiency and power, these Motors will recommend themselves to all interested in Launch or Loco work. That they will command a ready sale on account of their Compactness and Reasonable Prices goes without question. They are Reversible and Self-starting, fitted with Automatic Feed Copper Gauze Brushes and extra long Gunmetal Bearings.

List No. Size
1621. 1 in. wide, 1½ in. high, 3½ in. long ... each 60
1622. 1½ in. long ... each 10/6
No. 1621 is fitted with 1 in. Cast Tri-polar Armature.

1622. 1¼ Lam. " 1622 is suitable for No. 1 Gauge Loco and fitted with 7½ in. shaft.

1621 is suitable for No. 0 Gauge Loco and fitted with 7½ in. shaft.

List No. 1024.

Fibre Reversing Switch fitted with wire to either motor, 3½ extra. Postage 3d. & 4d. extra.

BOAT PROPELLERS.

Complete with Shaft and Flexible Coupling.
List No. 1622.
1625. Suit No. 095 or 1621 Motors each 1/3
1626. " 096 " 1622 " 1/7
1624. " 097 " 2/2
Postage 2d. and 3d. extra.

PROPELLERS ONLY.

1625. With set screw, each 1/4, postage 1d.
1626. " 7/2 " 1d.
1627. " 9/14d.
CHINA BELL PUSH

3 in. diam. (as illustration) Each 1/8
Postage 3½d. extra.

Polished Bases and Covers for 2½ Bells. No. 74.
Exceptional Value, the pair 6d.
Postage 3½d. extra.

BOAT OR LOCO GEARS.

Accurately cut and well-finished Worm Gear.
1½ in. wide, 1½ in. thick, weight 2 ozs.
Special Offer: 24 to 1, per pair, 1½d. Postage 1d.
We can supply any Gear specified to order at slight extra cost.

COC CEAR FOR BOATS, etc.

Specially made to fit our No. 095, 096, 097, 1621 or 1622 Motor Shaftes. Size 2 in. long, 1½ in. wide, 2 in. thick, weight 3 ozs.
Additional neat and compact, 4 Gear Wheels, 5½; Postage 2½d. extra.
Complete Gear in Gunmetal Case. Gears 3 to 1 and 2 to 1 stock size.

MODEL SHAFTING.

For connecting up any number of models to electric motors or engines to drive.

| LIST NO. | Each | POST EXTR.
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WORKING MODEL FOUNTAIN.

10 In. Cylinder, Brass, Each 2 6

NOTE REDUCED PRICES.

THE "DAKING FIGURE" MODEL

Magnetic Toy. Directions for fixing seat with each Set.
Dancing Figure (as illustration), 1, each.
Other Cards CARDED SETS include
Motor Parts, on card with instruc. 1/6
Cheap Ready-made Shocking Coils 1/2
Golf Parts ... ... 1½ and 2½
Electric Light Outfit on Cards ... ... 1/4, 1/6 and 2/6
Single Needle Telegraph Models ... ... 1/6 and 2/6
Morse Key and Sounder Parts, with instructions ... 2/6
Postage on any above, 3½d. extra.

WE GO RIGHT INTO DETAILS FROM PAGE 1 TO 96.
THE ECONOMIC ELECTRIC CO.

Telegrams—Economic, Twickenham

MODELS OF WORKSHOP
List No. 964.
(As illustration.)
Consisting of
Drop Hammer,
Punching Press,
Drill and Grindstone mounted on Japaned Base, 2½ in. by ¾ in.
Each 2/-.8
List No. 969.
Consisting of
Drop Hammer,
Drill Lathe and Punching Press, 1½ in. long, and 1½ in. high.
Each 4/-.7
List No. 954.
Consisting of
Few Machines,
2½ in. long and 1½ in. high.
Each ½/-
Postage ½d.

THE "RUBY" GAS LIGHTER.
Greatly improved since last season.
List No. 967.
Each 1/-
Postage free.

THAT
BRASS PUSH
we can supply at
List No. 36.
Each 1½d.
Postage 1½d.

BAROMETERS.
5½ in. Open Enamel Dial. Very accurate and reliable (can be recommended).
Each 11/-
8½ in. Larger Size, 16/.
HELMET OILERS.
For screwing into oil holes of small Dynamo and Motors.
Small each 1½d.
Medium each 2½d.
Large each 3½d.
Postage 1½d.

AGHROMATIC MICROSCOPES.
Ball and Socket Movement.
Splendid Action.
Height 6½ in.
List No. 48.
Each 10/-
Cabinet 15/-
6½ in., Mag. 60 times 10/-.8
6½ in., Mag. 25 times 15/-
6½ in., 2½ in. 20/-.2
6½ in., 1½ in. 25/-.2
Postage 6d. extra.

CORRECT MIRROR.
List No. 69.
£1 each
£1 12/- each
£2 12/- each
£2 18/- each

THE "STUDENT'S"
COMPLETE MICROSCOPE SET.
Very compact, in Polished Mahogany Case, with Slides and Forceps.
List No. 49.
Each 10/-
6½ in., Mag. 35 times 10/-
6½ in., 2½ in. 15/-
6½ in., 1½ in. 20/-
Postage 6d. extra.

POWERFUL ELECTRIC TRAMWAYS.
Model Electric Tramways, more especially when of new and up-to-date design, are always fascinating to the average Amateur. They convey to a studious mind the numerous electrical details connected with Modern Electric Practice. Any Amateur can erect these Models in a short time; only ordinary Electrical Knowledge IS NECESSARY. One advantage: there is no limit with this system to length, the rails are easily coupled up. To Shopkeepers these models make a very effective window attraction. Can be run off main supply if necessary.

List No. 332.
Each
330. Set complete, comprising 8 Curved Rails (about 9ft.) and one Electric Motor Car without batteries ....... 10/9
331. Set complete, comprising one Electric Tram Car and one open Car, 8 Curved Rails, and 4 Straight Rails ...... 14/6
332. Same as above, but with 2 Bichromate Batteries and Chromic Salts for Charging (complete as illustration) ...... 20/6
333. Extra Tram Car (complete) ...... 7/9
334. Ditto, Open ditto ...... 7/9
335. Rails, Curved to suit above track ...... 3/5
336. Ditto, Straight ditto ...... 6/5
337. Switches ...... 7/5 per pair
338. Crossings ...... 9/3 each

Latest Model of London Tube Locomotives, Splendid Finish.
List No. 339. Electric Locomotive, 8½ ins. long with 8 Curved Rails each 12/.
340. " " " " and one extra Car, total length, 18½ ins., 8 Curved and 4 Straight Rails, complete " " 15/5
341. Same as 340, including 2½ pint Bichromate Batteries and Chromic Salts " " 21/5

N.B.—Above prices are without headlights. If required with headlights as illustration add 2½ (2 Headlights each Car). We can supply to order above Cars for 110 or 220 direct current, per Car extra, 14/-. Postage, 1/- extra on above Sets. Extra Rails see list No. 335, 336, 337 and 338.

"E.E.C." ALWAYS RIGHT IN FRONT WITH LATEST MODELS.