Supplementary Instructions
for No. 2 Meccano Elektron Outfit

The following additional instructions are made necessary owing to improvements in the Meccano Elektron System. The No. 1A Elektron Accessory Outfit has been discontinued.

The Elektron Reading Lamp

The Reading Lamp shown in Fig. 9, and referred to on page 5 of this Manual, is constructed as follows. The Erinoid Tube (Part No. 1509) is fixed in the central hole in the Circular Base (Part No. 1508) and the Stand Bracket (Part No. 1510) is fitted on its upper end. Two Terminals are mounted above the Circular Base on ½ in. 6BA Bolts (Part No. 1575), pushed through the small holes from beneath, and fixed in position by means of 6 BA Hexagonal Nuts (Part No. 1562) above the Base. Two 13-in. lengths cut from the coil of Connection Wire (Part No. 1566) are pushed through the Erinoid Tube and over the Stand Bracket, their ends projecting about ¼ in. below the slotted end, and the insulation of the projecting ends is then removed.

The Lampholder (Part No. 1534) is held upside down and the small Insulating Washer (Part No. 1561) is dropped into the narrow portion, followed by the Lampholder Screw (Part No. 1535), the shank of which is pushed through the Washer and the hole in the Lampholder. The blade of the Screwdriver is placed in the slot of the Screw to hold it in position, and the Lampholder is turned the right way up while the large Insulating Bush (Part No. 182) is placed on the shank of the Screw, followed by a 6 BA Hexagonal Nut.

The slotted end of the Bracket is then inserted between the Lampholder and the Washer, and the end of one of the two wires is placed under it, care being taken that the wire does not make contact with the screw. The end of the second wire is coiled between the Washer and the Hexagonal Nut, as shown in Fig. 10. The small screw is now tightened, and the Connection Wire pulled gently through the Erinoid Tube until it rests in the curve of the Bracket. The ends passing below the Circular Base are freed from insulation for a length of about ½ in., and fixed under the heads of the bolts carrying the Terminals.

The Flashlamp Bulb (Part No. 184a) is screwed into the holder and the Terminals on the Circular Base are connected to those of the Bichromate Cell. The Switch (Part No. 1572) also should be included in the circuit, as shown in Fig. 9.

Mapping a Magnetic Field

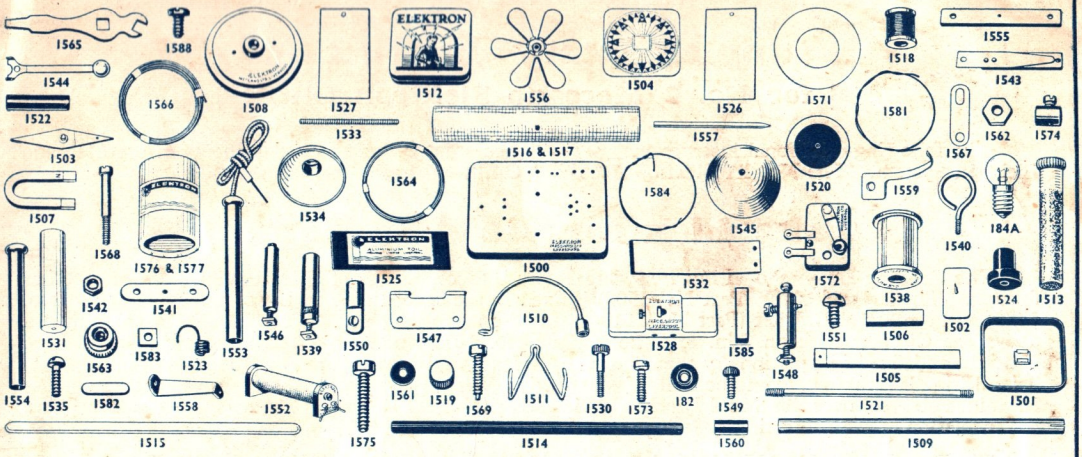
In order to map the magnetic field of the Electro-magnet referred to on page 7, Iron Filings from the Glass Tube (Part No. 1513) are placed in the Sifter Box (Part No. 1512), after the small parts packed in it have been removed, and are shaken through the small holes in its base over the cardboard sheet covering the Magnet Coil. When current is passed through the Coil and the cardboard sheet is tapped gently the filings arrange themselves in curves, running from north pole to south pole, that show the direction of the lines of magnetic force. The magnetic fields of the Bar and Horseshoe Magnets can be mapped in a similar manner.

Elektron Coils of Improved Design

The Magnet Coil (Part No. 1538) and the Wound Bobbin for Shocking Coil (Part No. 1552) are of improved design in which the ends of the windings are taken to terminals on the mouldings. In making the horseshoe electro-magnet, the electric bell, the shocking coil and other devices in which any of these coils are required, the necessary connections are therefore made by passing the ends of short lengths of Connection Wire through holes in the appropriate terminals, and securing them by tightening the terminal screws.

Acid for Elektron Experiments

Postal and railway regulations forbid the packing of sulphuric acid in Elektron Outfits. The acid required for the experiments described on page 1 and for the construction of the Elektron Bichromate Cell therefore should be purchased from a chemist or wireless dealer, or at a garage. Acid of accumulator strength should be asked for.



Revised Contents of Elektron Outfits and Complete List of Elektron Parts

No.		Qty. in Outfit No.1	Qty. in Outfit No.2
1500	Universal Base	–	1
1501	Compass Box	1	1
1502	Compass Mount and Pivot	1	1
1503	Compass Needle and Cup	1	1
1504	Compass Chart	1	1
1505	Bar Magnet	2	1
1506	Bar Magnet Keeper	2	–
1507	Horseshoe Magnet and Keeper	1	1
1508	Circular Base	1	1
1509	Erinoid Tube for Stand Bracket	1	1
1510	Stand Bracket	1	1
1511	Stirrup	1	–
1512	Sifter Box and Lid	1	1
1513	Tube of Iron Filings	1	1
1514	Ebonite Rod	2	–
1515	Glass ,,	1	–
1516	Square of Flannel	1	–
1517	,, ,, Silk	1	–
1518	Reel of Silk Thread	1	–
1519	Cork	2	–
1520	Electroscope Plate	1	–
1521	,, Rod	1	1
1522	Erinoid Sleeve 1¼" long	1	–
1523	Electroscope Hook	1	–
1524	Ebonite Bush	1	–
1525	Sheet of Aluminium Foil	1	–
1526	Copper Plate, 2"×1"	–	1
1527	Zinc ,, 2"×1"	–	1
1528	Cell Mounting	–	1
1530	Cell Mounting Bolt	–	1
1531	Zinc Rod	–	1
1532	Carbon Plate	–	2
1533	Threaded Rod	–	2
1534	Lampholder	–	1
1535	,, Screw	–	1
1538	Magnet Coil	–	2
1539	,, Core (complete)	–	2
1540	,, Hook	–	1
1541	,, Yoke, Small	–	1
1542	,, Hook Nut	–	1
1543	Bell Armature (complete)	–	1
1544	,, Rod and Hammer	–	1
1545	Gong	–	1
1546	Gong Pillar (with Nut and Screw)	–	1
1547	Angle Yoke	–	1
1548	Bell Contact Pillar (complete)	–	1
1549	Bell Contact Pillar Screw	–	–

No.		Qty. in Outfit No.1	Qty. in Outfit No.2
1550	Armature Support	–	1
1551	,, Screw	–	1
1552	Wound Bobbin for Shocking Coil	–	1
1553	Shocking Coil Handle	–	2
1554	,, ,, Slide	–	1
1555	Magnet Yoke, Large	–	1
1556	Armature and Commutator	–	1
1557	,, Shaft	–	1
1558	Bearing Bracket	–	1
1559	Commutator Contact Brush	–	1
1560	Erinoid Sleeve, 1/16" long	–	1
1561	Insulating Washer, Small	–	1
1562	6B.A. Hex. Nut	–	12
1563	Terminal	–	6
1564	10 yd. Coil No. 35G E.S.C.C. Copper Wire	–	1
1565	Spanner, Screwdriver	1	1
1566	Connection Wire	–	1
1567	Connecting Link	–	1
1568	6 B.A. 1" Special Bolt	–	1
1569	6 B.A. Contact Screw	–	–
1571	Coloured Ring	–	4
1572	Switch	–	1
1573	6 B.A. Bolt 3/8"	–	3
1575	6 B.A. Bolt, 1/2"	–	5
1576	Copper Sulphate in Container	–	1
1577	Bichromate of Potash in Container	–	1
1581	Length of Resistance Wire 6"	–	1
1582	Steel Piece	4	–
1583	6 B.A. Square Nut	–	1
1584	26G Copper Wire, 6" length	–	1
1585	Horseshoe Magnet Keeper	–	–
1586	26 G.S.C.C. Copper Wire	–	–
1587	23 ,, ,, ,,	–	–
1588	Screw for Bell Hammer and Bell Armature	–	1
1589	Manual of Instructions for Outfit No. 1	1	–
1590	Manual of Instructions for Outfit No. 2	–	1
1591	Terminal Screw for Coils	–	–
1592	Ebonite Disc in Holder	1	–
1593	Sparking Rod	1	–
1594	Brass Holder for Ebonite Rod	1	–
182	Insulating Bush 6B.A.	–	1
184a	Flashlamp Bulb 2½-volt	–	1

Manufactured by

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