

Michael Faraday's notebooks are a day by day record of his scientific research. He carefully wrote up the rough notes he made in the laboratory and sometimes illustrated the pages with small diagrams of his experiments.



This page from 1831 (in journal RI MS F_2_C) records Faraday's invention of the electric generator. You can see the apparatus illustrated although the description of the effect carries on over the page.

Transcription

Oct. 17, 1831

58. The needle did not remain deflected but returned to its place each time. The order of motions were inverse as in former expts. – the motions were in the direction consistent with former expts., i.e. the indicating needle tended to become parallel with the exciting magnet, being on the same side of the wire and poles of the same name in the same direction.
59. When the 8 helices were made one long helix the effect was not so strong on the galvanometer as before, probably not half so strong. So that it is best in pieces and combined in the end.
60. When only one of the 8 helices was used it was least powerfull – hardly sensible.
61. Made a sort of jacket of tin foil round a paper cylinder so that, being separated at the edges by paper, the galvanometer wires could be attached to. Then pushed magnet in and out but could perceive nothing at galvanometer. Could hardly indeed expect it, because as magnet introduced there was the part in advance ready to carry the current back. Now in coil, the part in advance could not do so. But jacket may be effectual with iron in its place made a magnet at once, either by contact of bars or by helix round it.

Oct. 18, 1831

62. Again charged battery of 12 troughs, 10 pr. each 4 inches square.
63. Re-experimented with block and coils M () connected as before with the Galvanometer. When battery was connected with one wire the other very feeble affected galvanometer. When contact was broken the galvanometer was affected the other way – the effect was very small, but it did not depend upon electricity of tension diffused from battery, as was evident from the direction of the disturbance.

