

10. *Lilienthal's experiments on flying*.—With the conviction that the flight of birds is an art which must be carefully studied, LILIENTHAL has practised himself in taking advantage of the remarkable fact discovered by Langley and by himself that with certain angles of inclination of wings to the direction of the wind, not only does the horizontal component of the wind disappear, but even may become negative, that is the fans which act as wings fly against the wind and can be raised by it. He accordingly selects a gentle incline free from woods or other obstruction to the free movement of the wind. This incline was usually not more than  $10$  or  $15^\circ$  to the horizon and ran against the direction of the wind. After some experience Lilienthal was enabled to soar distances of 120 to 150 meters against the wind. Professor A. du Bois Reymond states that after only four or five trials he was enabled to take leaps of from 15 to 20 meters long. Lilienthal by means of stronger winds has been enabled to soar in circles like those of birds similar to the hawk. If this practise of soaring is introduced as a sport, its use and the accumulated experience of many young athletes, may lead to our learning the art of flying. Prof. du Bois Reymond calls attention, in this connection, to the great skill that has been acquired in the art of balancing oneself on bicycles and similar machines.—*Physical Society of Berlin*, Dec. 15, 1893. *Ann. der Physik und Chemie*, No. 4, 1894, p. 42.

11. *Apparatus for the demonstration of Ampere's laws*.—In order to avoid the disturbance which is caused by the