must be concave. Some insects, as the *gyrinus*, which live chiefly upon the surface of the water, have two pairs of eyes, or perhaps a division of one pair into an upper and lower part — one set for looking into the water, and the other for looking into the air. The eyes of insects generally are fixed immovably in the head, and, therefore, they need some provision to enable them to see on all sides. This is accomplished by making their eyes polygonal, like a multiplying glass, which, in fact, amounts to giving them as many eyes as there are facets; for each plane will produce a separate image on the retina. In this sense the house fly has 14,000 eyes — that is, 7000 facets to each eye; the dragon fly, 25,000; the butterfly, 35,000; and the mordella, 50,000. How perfect must be the structure of the eye to keep so complex an organ in repair! Another fact in relation to the eye of the cod fish is still more striking in this connection. The crystalline lens in that fish, which is never half an inch in diameter, has been proved to be made up of more than 5,000,000 fibres, which are united together by more than 62,500,000,000 teeth!

The instincts of animals afford a prolific source of examples appropriate to my object. But presuming that many marvellous facts on this subject are known to all, I shall pass rapidly over it. Perhaps, however, no department of science presents facts so nearly approaching to romance as this. Indeed, the earlier works on zoölogy contain not a few statements that are really fictitious. Many, for example, still suppose that serpents have the power of charming their prey, and even man, within the reach of their fangs; a notion which is of a piece with the ancient stories about the sirens, — the *dulce malum in pelago*, — or with the modern notions about the conversion of a horsehair into a snake. But making all due allow-