the water to that distance. A large red wafer had the same effect as the half crown; it was neither wet itself, nor was the ring of glass contiguous to it wet. A circle of white paper produced the same effect; so did several other substances, which it would be too tedious to enumerate."

The statements to which we have alluded are true, but the deductions founded upon them are not tenable. It is true that both the under and upper sides of a body may be covered with dew, and that some bodies receive, under the same circumstances, a larger deposition than others. The beautiful theory proposed by Dr. Wells, and now universally adopted by philosophers, depends upon two principles;—the radiation of heat, and the condensation of invisible vapour. Before dew can be deposited on any substance, it must become colder than the surrounding atmosphere. It has been long known that dew is cold; for, as Dr. Wells states, both Cicero and Virgil apply to it the epithet "gelidus;" and Herodotus, speaking of the crocodile, says, that in Egypt it passes the greater part of the day on land, but that it passes the night in the waters of the Nile, they being warmer than the nocturnal atmosphere and the dew. But it was universally supposed that dew was the cause of the cold, instead of which it is the effect, and is produced by the radiation which bodies suffer.

Bodies possess different powers of radiation, dependant on their constitution; metals, for instance, are, in this respect, inferior to vitreous substances; and, as a general law, it may be stated that bad conductors, or bad reflectors of heat, are in general good radiators. But the power of radiation greatly depends upon the surface, polished surfaces radiating less than those which are uneven.

In the consideration of the phenomenon in question, it may be necessary to mention, first of all, the facts which have been ascertained, and then to give a reason for them.

1. A plate of glass placed in a horizontal position, or a piece of wool, receives very readily the deposition of dew. The pendent drops upon the delicate fibres of the gossamer must have been frequently observed by every lover of nature; but no such effect is produced upon a polished piece of metal; it retains its lustre, though every blade of grass may be drooping with the pressure of the vapour that has been condensed upon it. But why do some bodies admit the for-