

mation of vapour upon them, and others resist its deposition! All bodies radiate heat, and at all times, but some do so more than others. Substances that have a close and compact texture do not generally radiate so readily as those which are open or porous; the metals belong to the first class, cloth, wool, and swan'sdown, to the second. It is a singular fact, that those substances which radiate most readily are the worst conductors of heat; and these facts lead at once to the deduction, that, during the night, the temperatures of substances must be different, and that they must, in this particular, be governed by their powers of radiation and conduction. These statements are easily proved by a thermometer; for, if wool and a metal be placed under the same circumstance, the temperature of the former will be invariably lower than that of the latter.

2. The vapour of the surrounding air will be condensed upon the bodies whose temperature is lower than that of the air itself. The deposition of dew depends upon the production of a lower temperature in the body bedewed, than in the atmosphere which surrounds it. Now all the bodies which radiate more heat than is conveyed to them by the earth, or any substance with which they may be in contact, when thus lowered, are covered by a condensed vapour which we call dew.

But it has been stated, that some conditions of the atmosphere are more favourable to the deposition of dew than others. Clouds prevent the deposition of dew; for as all bodies radiate heat, clouds do so as well as terrestrial substances, and therefore there is a mutual action between them—both giving, and both receiving; and thus the temperature is in some degree equalised, and no dew is formed. The same effect will be produced if any terrestrial body intervenes between the sky and the radiating substance. Even a thin wire gauze, suspended over a substance which readily admits the deposition of dew, will be sufficient to prevent the effect. Dr. Wells, to whom we are indebted for the theory we attempt to explain, a man equally admirable for his amiable manners, humility, perseverance in examination, and powers of generalization, gives his authority to the statement:—"I had often," he says, "in the pride of half-knowledge, smiled at the means frequently employed by gardeners to protect tender plants from cold, as it appeared to me impossible