(100.) Connected with the colours of thin plates are several distinct classes of optical phænomena, in which colours of the same kind, and explicable on the same principle, arise in the reflexion and transmission of light through or between pellucid plates of considerable thickness, or through spherical drops of water, examples of which are to be observed in the pink and green fringes which are often seen bordering the interior of a rainbow, and in those similarly coloured fringes (of exceedingly rare occurrence) which sometimes run, like a bordering ribband, just within the contour of a thin white cloud in the near neighbourhood of the sun. Upon this class of phænomena, however, we shall not dwell further than to observe that they prove the law of the periodical recurrence of similar phases at equal intervals, not to be confined to very minute distances in the immediate neighbourhood of reflecting or refracting surfaces, but to extend over the whole course of a ray of light—as, on the undulatory theory, it necessarily must do. We now,

whose knowledge of dynamics is limited by this very elementary application. Properly speaking, we ought to assume the coercive force to vary in the direct ratio of the distance; on which supposition only will large and small vibrations be executed in equal times. Calculating on this (the correct) principle, and taking the extreme excursion (as in the text) at one-trillionth of an inch, the ratio of the coercive force to gravity at that distance will be found as 35,465,000,000 to 1. On the other hand, as a strange contrast to the immensity of such a force, we shall find the maximum velocity it will have generated on the arrival of the molecule at the medial point of its vibration not to exceed 1-270th part of an inch per second!

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