

limit. Thus disembarrassed of the complexity of overlapping rings of several colours, the phænomenon now is studied to greater advantage, and its explanation on either theory is more readily intelligible. That afforded by the corpuscular theory (supplemented by the Newtonian hypothesis of the fits of easy reflexion and transmission) is very simple and obvious. These "fits" or *phases*, it will be remembered, are supposed *periodically recurrent*—*i.e.*, succeed one another, or rather are repeated over and over again, in the same order and intensity, at equal intervals *of time*. The same *phase* then will recur to the corpuscles, at equidistant points *of space* in their progress through any uniform medium (in which the velocity of light is constant). Where the thickness of the film is *nil*, or so very minute as to bear no comparison to the distance which separates two of the equidistant points, it is obvious that having passed one surface they will still be in a state to pass through another, and will therefore *not* be reflected, so that in that case the reflected illumination of the first surface will receive no augmentation from light reflected at the second. The same is true if the thickness of the film be exactly that of two such equidistant points, or its double, triple, &c., for in those cases the corpuscle will arrive at the second surface in the same state and with the same dispositions as to reflexion or transmission as at the first; and therefore, having penetrated the first, will also penetrate the second. On the other hand, for thicknesses of the film exactly intermediate between these, the corpuscle on arrival at the second surface will be exactly