

of the best architect. The principal rule now recognized for the illumination of schools by natural means is much the same as the one to be observed in lighting them artificially, viz. :—*the light should never shine directly or by reflection into the eyes of either pupil or teacher ; it should be fairly constant in character, and should fall equally upon all parts of the work in hand, whether it be a near object (like a book or a slate) or a distant object (as a blackboard or a map) with about the same intensity.*

When night comes on, or when, as often happens in the offices, stores and workshops of cities especially, it is necessary to resort to an artificial illuminant during the daytime, the problem becomes more complex. Some years ago I was asked to investigate this matter in the case of printers.*

I have since found that the difficulties encountered in the attempt to properly illuminate newspaper and other printing offices and workrooms are much the same as those experienced by clerks in banks, bookkeepers, stenographers, workmen at the bench—in fact, by most of those who pursue a sedentary occupation of any kind. Indeed the same causes of complaint exist in many private houses. These troubles, strange to say, have been intensified by the introduction and almost universal employment of brighter, whiter and in some respects better lights. Among these are the various forms of the electric light,—the Welsbach and the Auer light. These admirable sources of illumination are, in my experience, powerful agents for evil when their employment is not hedged about by certain precautions.

Indeed, I feel sure that the ordinary electric lamp, as we usually find it arranged in private houses, is a common source of eye trouble. As to the arc light, particularly when it is unprotected by a ground glass globe, is a most fertile source of ocular irritation and disease when it is employed to illuminate warehouses, halls, hotel rotundas, ball rooms and other large apartments. Even the employment of the naked arc light in street illumination is trying to the eyes of the passer-by.

In dealing with this subject, it is wise to study the conditions under which both healthy and defective vision is accomplished. To attain this end it is not necessary that the reader should make an extended study of physiological optics, or that the writer should

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