artistic manufacturers of France command the markets of the world. The industrial schools more recently organized in Germany, Switzerland, Belgium, Austria, Italy and England, which in the aggregate are numbered by thousands, make these nations formidable competitors in artistic work.

When invited by the minister of public instruction of France to visit the National Porcelain Factory at Sevres, I expressed to him surprise that such an establishment should come under the supervision of the educational department, to which he replied, "It is because it is the duty of this department to supervise and control the preparatory school for Sevres, which you shall first visit." On inspecting this school of design in Paris, I found in the lower rooms the methods and work of a first-class drawing-school. But in the upper rooms the classes were painting on elegant goblets, cups, plates, vases, and other choicer ware, just brought from Sevres, and to return there for baking. After witnessing this truly artistic work, I no longer wondered that in the Sevres factory itself the artisan had indeed become the artist, and that only men of princely wealth could procure the products of this unrivalled establishment.

In Belgium the girls have shared the advantages of industrial schools as well as the boys. The schools for training in lace-making and embroidering in Brussels have long been celebrated, and kindred schools have more recently been opened in Rowles, Ghent, Ash, Deerlyk, and in many other places in this little kingdom. To those familiar with this fact, it was no surprise that Belgium lace shown at the Philadelphia Exposition was unrivalled. Some industrials are maintained wholly by the central government. Others particular, and others are supported by endowments, and many are private institutions, dependent mostly on tuition for support. A large number called Apprentice Schools are maintained by benevolent associations. These are designed to train boys and girls both in skilled mani-

Belgium with about fifty industrial schools, and fifteen thousand apprentices graduated from them; Germany with over fifty-two thousand apprentices in fourteen hundred and fifty industrial schools; and France with twelve thousand industrial schools; and France with twelve thousand industrial schools; show France with twelve thousand industrial schools; and desks arranged parallel to the short walls. These rules having long been known, it will hardly be believed the practical appreciation of these institutions in those countries which distanced the competition of surround- a rule that all school windows should be so placed as ing nations in the great markets of the world. Steam to allow of a full light falling upon the faces both of the and the telegraph are bringing all nations into such near neighbourhood, that industrial ascendancy will belong to that country that provides the best industrial is the very worst that could possibly be contrived.

## Light and Air.

recently given another lecture on the same subject, and has now published the two together. Under ordinary circumstances we should have briefly noticed these the lecturer, but arises from a physiological law not

and the pre-eminence thus gained is still retained. The lectures in our review columns; but there seem to be reasons at the present moment why special prominence should be given to the subject. First, it is always a matter of the greatest importance to all, whether parents or teachers, that education should be so managed as to produce no injurious physical effects; secondly, there are indications that public attention is about to be strongly turned in the direction of educational appliances. Unduly prolonged school hours, too intense applcation, neglect or ignorance of Nature's rules as to posture, direction of light, ventilation, clothing, or exercice, tend, it is found, to produce not only short sight, but also curvature of the spine, and general functional weakness. A correspondent writes to the *Times*, stating that in his boyhood the walls of the school rooms were usually whitewashed, with nothing but a few maps to relieve the eye. The consequence was ophthalmia, prevalent in a more or less severe form throughout the school. In one of the so-called "Society" journals, a paterfamilias writes complaining bitterly of the mean and unintelligent arrangements as to seats, whitewash, and light in one of our largest public schools. In another paper the question is asked why school-room walls should not be made pleasant to the eye. Why should the school-rooms present a surface of strong white belted or edged with strong black? Outside, Nature has provided gentle greens, cool greys, and browns; in the better class of houses the same refreshing neutrality of tint prevails; why should we not consider the eyes of our boys and girls, and paint the walls so that the sight may be refreshed and not oppressed ? In the same way, why should black-boards be black, and not green, blue, or drab, which would just as well show the chalk, without the violent and, to some, painful contrast ?

What, however, are the conditions and arrangements incontestably unfavourable to the eyesight and to general health? Let Mr. Liebreich tell us. In the first place, insufficient or ill-arranged light. The windows should be so placed, or the desks so arranged with pulations in various trades, and in the practical studies regard to the windows, that the light may fall, in and theories most helpful in such pursuits. sufficient strength, from the left hand side, not from the sufficient strength, from the left hand side, not from the front; and from above, not from a level with the eye. For writing the desk should be raised twenty degrees, and for reading forty. The class-room should be oblong, the windows should be in one of the long sides, and the education.—Hon. B. G. Northrop, State Supt. Public Instruc-tion, Connecticut. Again, as regards evening work, the light should not be from naked gas jets, which give a flickering and unsteady light, but from glass cylinders with reflectors. Ground glass should not be used. Again, as regards the benches, they must have low backs, not slanting back-wards, fixed at a height close above the hips; the seat ought to be broad enough to support almost the whole length of the thigh, and the height of the seat such as to allow the sole of the foot Some six years ago, a remarkable lecture on the influence of school life on sight and figure was delivered before the College of Preceptors by Mr. R. Liebreich, Consulting Ophthalmic Surgeon to St. Thomas's Hospi-tal. The London School Board took up the subject, and to a large extent carried out in practice the principles laid down by the lecturer. Mr. Liebreich has more recently given another lecture on the same subject and