

Industrial schools in Germany.

The French Government has recently issued a Report by Mons. F. Buisson, the delegate from France to the late Vienna and the Philadelphia Expositions, on the present condition of Technical Education in the principal countries of Europe and America, where of late years a great number of institutions, of a novel character, designed to form the transition between the school and the workshop, have been established. We abridge from this Report what M. Buisson says of the state of technical education in some of the principal states of Germany, where the movement may be said to have originated, and where we have to look for the best models of those industrial schools, which efforts are now being made in various quarters to establish among ourselves.

In Saxony, contrary to the practice elsewhere almost universal in Germany, instruction in trades and for business is made to follow immediately that of the daily primary school. To this circumstance is owing the establishment of the schools of building at Leipsic, Dresden, and other places; and all that fine group of special schools at Chemnitz, designed to give preparation for mechanical, manufacturing, and chemical, industries, industrial, art, etc.; and, in addition, a great number of lower schools for weaving, lace-making, needle-work, and wood-carving.

In North Germany the model of the industrial establishments of all grades is incontestably that at Hamburg. The general school and the special school for building, open in the evening and on Sunday for apprentice and workmen, and every day to pupils who have the time at their disposal, imparts remarkable instruction in all respects, in its simplicity, its excellent method, its practical character, and the variety of its applications. The industrial school for girls which was founded in 1867, is managed in the same spirit, and with a success equally marked. The organization of these establishments, and the course of instruction which they have adopted, were the object of the most lively attention and sympathy at Vienna.

Of all countries in Germany, Wurtemberg was the first to give large development to popular industrial instruction. The great special school for building, at Stuggard, numbers some seven hundred students of whom it demands for admission only good primary instruction, or the qualification of apprentices or workmen in the branch of industry. The State aids of establishment by a yearly appropriation of 80,000 francs. The course requires from two to five years. Wurtemberg has also several good schools for weaving, of which three received awards for excellent method, and the practical character for their work. In all, there are fifty industrial schools in Wurtemberg. The Grand Duchy of Baden has also had for many years in operation very good industrial schools which have exercised a marked influence on the industries of the country.

Bavaria, although introducing this kind of practical instruction at a later day than some of the neighbouring countries, possesses already from a hundred to a hundred and fifty industrial schools, some of them elementary, and placed immediately above the primary schools; others in a degree higher, eight of them serving as model schools for eight Circles; and still others devoted to special industries as building, the construction of machines, drawing and sculpture applied to the making of furniture and objects of art of all kinds.

The single polytechnic association of the Circle of Wurzburg has established within a few years 111 industrial schools or courses, of which 16 are for apprentices and workmen. These different establishments, spread over a territory scarcely larger than one of our French departments, employ 315 professors; and teach German, French, Calligraphy, Book-keeping, Arithmetic, and the Metric System with special reference to applications to commercial affairs, Geometry, Design, Modeling, outline of Natural History, Hygiene, Political Economy, &c.

Austria began the organisation of industrial instruction at a later day than Germany, but she has developed it with a rapidity and a success which are truly extraordinary. There is no other country, we believe, which has done more in this regard within the last six or eight years.

After having placed herself among the first nations in Europe for the encouragement given to superior or polytechnic education, Austria had no industrial establishment for the people. She resembled ten years ago an army which has at its head, a brilliant major general, very mediocre corps, and no subordinate officers at all. Between the highest and the lowest industries, as between patron and workman, the tie of union failed.

The trade and business of the country seemed manacled for the want of foremen. The gradual decrease of the middle class, the elite among workmen, indispensable as they are to commerce, agriculture, manufactures, and all other kinds of industry, so stirred up public opinion that the Government, urged and seconded by numerous societies of landlords, manufacturers, and economists, undertook to establish at once a system of institutions for imparting instruction in trades and business, to large class of workmen and labourers and their children. The Real Schools were at first re-organized in a way to lead from polytechnic instruction to the higher special industries. Then, below the Real Schools, designed for the burgher class, they established schools more popular and of a character more specially industrial, adapted to prepare foremen for different important branches of industry. Some of these are "complementary" schools, and merely review the ordinary branches of school instruction with a view to their practical application, or impart this knowledge in connection with a more special course of preparation for apprenticeship; others devote themselves exclusively to preparation for apprenticeship, and still others assume as a preliminary an apprenticeship to some trade or branch of business.

Thus Austria possessed eight years ago three schools for weaving, at Vienna, Reichenberg, and Brunn; she has now added, as popular "complementary" schools, twenty lower schools for weaving, two or three schools for lace making and as many workshop schools. Several of these schools so recently established, received marked commendation at the Exposition, for the success with which they already apply the latest improvements introduced into the process of manufacturing in the different stages of their instruction, and, for what is more difficult, the style and taste which they apply in developing new departments of design.

In another branch, the industry of building, Austria for a long time possessed only an establishment for higher instruction. She opened, in 1862, at Kagenfurt, a school and workshop for the whole group of mechanical industries; then, in 1864, at Vienna, a remarkable school for building, founded by Mr. Maerteus, and subsidized in common by the State, the Province and the Commune of Vienna. This establishment, which receives scholars without any other preparation than that of the primary school, has provided an excellent programme of industrial instruction, both theoretical and practical, for foremen as carpenters, cabinet-makers, masons, &c. Six other analogous establishments have grown up since 1870, in the capital and in the provinces, partly from subsidies granted jointly by the ministers of education and commerce. To this statement we must add the special school for watch making at Vienna; and throughout the Empire, fifteen schools for giving instruction in the arts of working in wood, marble, and ivory; six for instruction in making toys; four for instruction in making baskets and mats; and seven for instruction in making garments and other metallurgic industries.

Several of these foundations have been acknowledged as a public benefit by the rural population of the Empire. The schools for the sculpture of wood, for example, have created a new kind of business in the mountainous districts of Bohemia, Silesia, and Moravia, where they make a great many toys for children at a low price; and also in several localities of the Austrian Alps, in the Tyrol notably, where the shepherds are as skilful as those of Switzerland or the Black Forest in cutting in wood and carving with knives the figures of animals, cottages, boxes and statuettes, without art but not without grace. Besides, in the Duchy of Salzburg, for example, the local industry, which had very much slackened or wholly disappeared owing to the exhaustion of salt in the mines, has returned again very opportunely upon the introduction of new kinds of business, with schools to prepare the young for them.

Even among the schools that give instruction in woodwork only, each is required by the Government to specialize sufficiently to accommodate itself to the particular needs and resources of the region in which it is located. In the Tyrol, for example, the shop school of sculptor Greissmann, at Imst, attracting attention at the Exposition for the good taste shown in its scholars' work, is designed to develop, over all others, artistic cabinet work and ornamental furniture. At Innsbruck, the industrial school applies itself to figures; that of Mondsee, to groups of animals; and that of Saint Ulrich, to the sculpture of religious statues, and that of Wallern, to the commoner kinds of furniture, and to cases for clocks, &c.

The industry of glass-making, especially in Bohemia, had,