

Diagrams for teaching the working of pumps, &c., and of the electric telegraph, may be seen on the walls,

III. SAXONY.

In a little temple in the Park is a modest but very excellent exhibition of school books and apparatus sent by Saxony, the cradle of German education; for here in the sixteenth century were sown the seeds of that system of popular instruction which has since spread over Germany. In the centre is a model of the Gymnastic School of Dresden. On the counters and walls are to be found Lange's excellent atlas (Leipsic), giving a full account, physical and commercial, of Saxony; Delitsch's elementary Atlas of the world, a marvel of cheapness (six maps for 14d.); Luben's Atlas of Botany, which they seem to teach carefully in the Saxon schools; Schnorr's Bible woodcuts; and much else worthy of attention.

IV. SWEDEN.

The Swedish Government has furnished the lower chamber of a most picturesque little wooden house so as to represent one of their small village schools. Since 1842 education has been obligatory in Sweden; the entire absence of dissent makes it possible for the Government to work the schools through the ecclesiastical organisation of the country. Each parish is rated according to its requirements, as reported by the clergyman and approved by the inspector. If we may judge by what is here seen, the furniture is of an almost sumptuous kind. Each child has a small desk and seat to himself; the desk holds his books, &c.; the seat has a back. The teacher thus passes freely among all the children. In the larger schools of more thickly-peopled countries this would be, of course, impossible.

The maps of Scandinavia are, perhaps, the most striking school maps in the whole Exhibition. They are by Mentzer (No. 11). The stove is of earthenware, as in their houses, warming the air by conduction, not by radiation.

V. DENMARK.

From Denmark I find a very complete collection of scholars' work from the various primary schools of Copenhagen. The boys' drawings and writing books are good, the girls' needlework admirable. In all the schools the English character of writing is taught as well as the German.

An excellent adult night school, supported by voluntary subscriptions, for teaching drawing, also sends good results. In England a school for teaching drawing would hardly draw forth the charitable contributions of our gentlefolk.

VI. AUSTRIA.

The well-stored assortment of school apparatus sent by the Austrian Government is nearly all under glass, and difficult to examine.

The best globes of every size and price are from Austria. Steinhäuser's maps of physical geography, Frobel's "Kindergarten," Patek's apparatus for teaching arithmetic, from the St. Anna School at Vienna, all deserve notice. I never saw in an English school the Vienna frame for teaching vulgar fractions. It is like a ball-frame, only on the wires, instead of balls, you have divisible reeds. The uppermost is undivided, and represents the integer. From those below, which are divided into fractional parts, and run on the wires, the child sees at once that three fourths are equal to six eighths, greater than two thirds, less than four fifths, &c.

In large portfolios are to be found specimens of drawings in every stage. Better methods of teaching drawing in connection with ornamentation can hardly be conceived. In this respect the Austrian exhibition seems to me unrivalled. I may also mention very cheap telluriums and planetariums, from 30s. to £5, sold by Felke of Prague. By lighting the lamp and turning the handle, the whole theory of day and night, of the seasons, and of eclipses, is shown to the child at once. One of the cheaper sort might well be in every village school. All the Austrian school apparatus seems to be far cheaper than that of France or England.

VII. SPAIN.

In the upper room of an elaborately carved and turreted house in the park is to be found the Spanish school exhibition. Without an interpreter it is difficult to understand it. The eye is at once caught by a school-desk, long enough for five children, supported by five simple cast-iron standards. Instead of a bench, as in England with all the attendant inconvenience of stepping over, there are five round seats, each seat resting on a continuation of the iron standard, like so many music-stools before a pianoforte. When the class is told to stand, each child stands at once by the side of his seat, and can leave or resume his place without difficulty. When used for needlework cushions are attached to the desk, to which the girls may pin their

work. Under No. 87 will be found a cheap box of geometrical solids of walnut-wood, the best perhaps in the Exhibition. Moreuilla's method of teaching reading (No. 73), and Iturzaeta's writing copies (No. 91) appear to be good. Advendano (No. 88) is their great publisher of school books at Madrid; and Bastinos, of Barcelona (No. 34), is a well known house for all sorts of school apparatus. There is a society (or junta) of noble ladies at Madrid who maintain a Normal School, and have founded numerous elementary schools, also represented, though inadequately, in this Exhibition.

VIII. ITALY.

The exhibition from Italy indicates a rapid and satisfactory progress in the last few years. The Minister of Instruction and Worship sends a very complete assortment, including a full account of their recent legislation in favour of education. Paravia the great publisher at Turin, sends text-books of every sort; those of Lambruschini and of Carbonati are reported to be excellent. Perrin of Turin (No. 13), sends copy-books, as good as any in the Exhibition, to be had for half the cost of English copy-books. Luca, of Naples (No. 38), sends very good books on geography. All their older educational societies have recently consolidated into the Italian Association for the Education of the People, which (under No. 2) exhibits good evidence of progress. The architectural and ornamental drawings from the Schools of Naples, Venice, and Padua are most beautiful.

It is to be regretted that some other countries, in which education has already made and is now making great progress, are so inadequately represented.

BELGIUM sends but little:—The school-books of Braun (No. 2) and of Willequet (No. 16), Joly's Atlas (No. 11), and Callewert's (No. 3), should be noticed.

HOLLAND and SWITZERLAND, both nations honourably distinguished for what they have accomplished in the cause of popular education, send nothing.

CANADA sends excellent school-books (note especially, the commercial copy-books) from the Upper Province, and School apparatus from the Lower. There is also an interesting model of the village of St. Anne showing the great agricultural school and its system of husbandry. The model was made by the teachers of the institution.

UNITED STATES OF AMERICA.—Nothing belonging to this Class had arrived at the date of this report (May 14).

Such are my principal gleanings from my month's study of this portion of the Exhibition. But, in conclusion, I must record my strong impression that any educational exhibition of this kind must be, from the nature of the case, unsatisfactory. As a test of comparative progress, it is clearly untrustworthy. Nations whose administration is highly centralised are sure to appear to advantage as compared with those which trust chiefly to voluntary effort. And of the work done it is the *material*—i. e., the least important—results only that can be properly represented. How, for instance, can a teacher's success as a disciplinarian be made to appear in such an exhibition? Even of the mechanical appliances a trustworthy judgment can hardly be formed unless one has a practical teacher by one's side to answer the question, "How do they work?" And of the real tools of a teacher, his school books, it is of course impossible to make any profitable examination while standing before a glass case. Still Class 89 contains abundance to interest an English schoolmaster, and the above report may perhaps help to direct him to what will best repay his attention.—*Report to committee of council on Education.*

An Imperishable Unit of Length.

THE METRIC SYSTEM.

The hope of furnishing an unchangeable unit of length appears to have often exercised the thoughts of the wisest and most learned as well as the most powerful men in times past. The cubit and other ancient measures were well understood to have retained no exactitude more than a thousand years ago although some of them were nominally preserved. As civilization slowly progressed under various influences the want of some definite unalterable standard or unit became more and more felt. In some cases, for a time at least, the want seemed to be supplied either by means of some ingenious recourse to natural objects supposed to be constant in form and size or by some arbitrary standard fixed upon under circumstances imagined adequate to secure permanence. Thus Charlemaigne, finding that the problem was insoluble in his day ordered the measurement of his own foot, inclusive of the polished steel shoe taken worn, to be used as a standard of length and to be correctly marked inside public monuments to secure its preservation; and Edward the first of England proposed the adoption of the length of his arm to be the standard yard. But in course of time not only did the models of the