

bog ores must be exceptionally free from phosphoric acid ; for otherwise they would yield a tender, and not a strong iron like that which the wheels above mentioned are stated to consist. Massive and characteristic specimens of magnetic ores are exhibited, as well as fine specimens of bog-iron ore and red hematite. Large lumps of red ore from the Silurian rocks are also shown, but they are of inferior value from containing a large amount of earthy matter, and frequently less than 50 per cent. of metallic iron. There is a descriptive catalogue, by Sir W. Logan, of the economic minerals in the Canadian department, which is replete with valuable information, scientific as well as commercial, and we can recommend it with confidence to all who are interested in the subject.

2. THE EDUCATIONAL DEPARTMENT OF THE INTERNATIONAL EXHIBITION.

The scheme of an Educational Exhibition, which was drawn up by the superintendent and the members of that committee, was a much more extensive and comprehensive one than it has been found possible to realize in so small a space. It was hoped that the court would be an international one ; but the foreign commissioners expressed a wish to keep the educational collection of each nation separate ; and therefore the opportunities of comparing the books and appliances used in the schools of different parts of Europe with each other, do not exist. The list of articles admissible into this class possesses some interest, however, as it indicates the range of objects and the mode of classification originally contemplated by the committee.

The space demanded by exhibitors to this class amounted to nearly fifteen times the actual area at the disposal of the national committee, and unusual difficulty was, therefore, experienced in reducing the applications, and allotting the space in harmony with the original scheme. The following is the classification finally adopted by the superintendent :—

- A. Books, Maps, and Diagrams.
- B. Apparatus employed in Teaching.
- C. Toys and Games.
- D. Illustrations of Elementary Science.

A few of the most noteworthy objects in each of these classes are here indicated.

All the principal educational publishers have sent their latest school manuals and treatises to this class, and an arrangement of the books has been made, by which it is easy for visitors to consult them. Teachers and managers of schools will find this permission a great advantage. One bay or recess is exclusively devoted to books on education ; and the newest works issued by Messrs. Longman, Macmillan, Black, Gordon, Dr. Cornwell, Nelson, and many well-known educational publishers, are displayed here. The Christian Knowledge, the Religious Tract, the Christian Vernacular Education Society for India, and the British and Foreign Bible Society, also exhibit their latest publications. Of the maps, Messrs. Stanford, Mr. Nelson, and Mr. Wyld will attract most attention. A very ingenious mode of projecting the maps of the two hemispheres, so as to exhibit the true globular character of the earth, and to correct the false impressions which children derive from seeing two flat circular pictures, is also exhibited by Mr. Abbott.

The collection is especially rich in miscellaneous diagrams for educational purposes, and in contrivances not only for instruction, but for making the walls of a school-room cheerful and picturesque. In this department, Messrs. Darton and Hodge make the most conspicuous show ; but Messrs. Griffith and Farran, Mr. Gordon of Edinburgh, and the Religious Tract Society, have made important contributions. The globes of Messrs. Smith and Mr. Newton, and the inflated India-rubber globes of Messrs. Macintosh, are among the most remarkable specimens of manufacture in this department, and Mr. Betts shows some portable globes in alate and other cheap materials for school use.

B. Educational Apparatus generally.

One of the most remarkable features of this exhibition is the interest which has been shewn in it by all the great religious and educational societies. The National Society, the Home and Colonial, the Reformatory and Refuge Union, the two Sunday-school Societies, and the Congregation Board, have each in its own way sought to illustrate the work which they are doing. Several of the collections which have been formed are of great interest and value. Thus, the National and the British and Foreign School Societies severally display complete sets of the fittings, furniture, tabular lessons, books, apparatus and pictures, required in the equipment of elementary schools. The stall occupied by the former society contains a beautiful set of models in miniature of the most improved plans of desks, easels, and other school-fittings. The British and Foreign Sunday-school has adorned its very interesting depart-

ment with a large drawing of its New Training College, recently erected at Stockwell, for one hundred mistresses. Infant schools have long been under the special care of the Home and Colonial School Society ; and it is, therefore, fitting that in its department the beautiful and rational discipline of the Kinder Garten, and all the newest contrivances for making very little children happy in school, should be well illustrated. The bay which contains these articles, and the large model of the Gray's Inn Road Infant School, also includes the tablets and books of the Sunday School Union, and a group of very ingenious pictures, puzzles, and other educational appliances, by Messrs. Joseph Myers and Co.

The work of the Reformatory and Ragged Schools is illustrated by a novel and singular contrivance. A large portion of a counter is occupied by a model representing the career of a street urchin, who is rescued from vice and degradation, and conducted, through the Ragged School or the Reformatory, and a subsequent course of wholesome industrial training, until he becomes a prosperous colonist.

Close to this series of tableaux there is appropriately placed a model of the latest addition to the Philanthropic Farm School at Red Hill. It is a house built in memory of the late Samuel Gurney, which is adapted for the reception of fifty boys, and which forms, we believe, the fifth of the homes erected by the society on their admirably managed estate.

The adjacent bay is devoted to the illustration of the mode employed in teaching drawing and design. Here the Science and Art Department exhibits a complete series, exemplifying the course of instruction pursued in the Government Schools of Design.

Messrs. Reeves, Rowney, Robertson, Newman, and Wolff, contribute specimens of the materials employed in Art Education ; while Mr. Crydon, and Mr. Brucciani, and Mr. Sharpe of Dublin, have sent drawing models of a curious and novel character.

To the philanthropist few features of the Educational Court will be more significant and attractive than the small recess devoted to the illustration of processes employed in teaching the blind. Every expedient and artifice for instructing the blind in reading, in writing, in arithmetic, in geography, and in the industrial arts, will be found here. It is well known that there has been much controversy among the friends and supporters of various blind asylums respecting the best plan of teaching reading. By many it is believed that a phonetic system, free from the anomalies and difficulties of the ordinary alphabet, may be advantageously used in the case of those pupils who, having never seen a book, have nothing to unlearn, and are, therefore, free from all the embarrassments which the use of our orthography creates. It is especially interesting to study the several forms of alphabets which have been devised for this purpose, and to observe that experience seems to have led to the adoption of the ordinary Roman characters ; and to the assimilation of raised type for the blind to the familiar character employed in other books. Some embossed maps and pictures, writing and ciphering frames, and two large globes in relief, will be found worthy of special notice by all those who care to investigate the ingenious contrivances now in use in our blind asylums. Viscount Cranborne and Mr. Edmund Johnson have not only contributed to this department many models, embossed books, and other objects of interest, but have taken an active personal share in the selection and arrangement of the whole collection. We may call special attention here to the beautiful specimens of work done in the Indigent Blind Asylum, and in the associations at St. John's Wood and the Euston Road.

Of the miscellaneous objects of interest in the sub-class of apparatus, we may notice the models of improved desks and forms for school use.

Mr. Haskins exhibits two musical instruments called organ accordions, which resemble the old accordion, with the exception of the keys, which are like those of a piano-forte. Mr. Haskins exhibits these instruments for the use of schools, and also for small places of worship where there is no organ. Mr. Curwen also illustrates his musical system, which is doing so much to revolutionize the singing in our elementary schools, in a very effective manner ; but a large number of curious and useful devices for facilitating instruction in various forms will be found both on the north and south sides of the rooms.

C. Toys and Games.

No attempt has been made to confine the exhibition in this sub-class to such toys as have a distinctly educational purpose ; the centre of the apartment will, therefore, be found to contain a great many articles which, though very beautiful and interesting, appear somewhat out of place in the educational division. Foremost among these are the magnificent dolls of Messrs. Montanari ; the new games invented by Jaques and Son, and by M'Cremer ; and the toys of Messrs. Mead and Powell. But besides these the centre of the room contains many objects which serve the double purpose of amusement and education. Such are the contrivances for phys-