Cook in his second expedition as sailing-master of the "Resolution," and in 1787 was despatched to the Pacific in command of H.M.S. "Bounty," for the purpose of introducing into the West Indies the bread-fruit tree from the South Sea Islands. Bligh sailed, in 1787, from Otaheite, where he had remained about six months; but, when near the Friendly Islands, a mutiny broke out on board the "Bounty," headed by Fletcher Christian, the master's mate, and Bligh, with eighteen others, was set adrift in the launch. This mutiny, which forms the subject of Byron's *Island*, did not arise so much from tyranny on the part of Bligh as from attachments contracted between the seamen and the women of Otaheite. After suffering severely from hunger, thirst, and storms, Bligh and his companions landed at Timor in the East Indies, having performed a voyage of about 4000 miles in an open boat. Bligh returned to England in 1790, and he was soon afterwards appointed to the "Providence," in which he effected the purpose of his former appointment by introducing the bread-fruit tree into the West India Islands. He showed great courage at the mutiny of the Nore in 1797, and in the same year took part in the battle of Camperdown, where Admiral Duncan defeated the Dutch under De Winter. In 1801 he commanded the "Glatton" at the battle of Copenhagen, and received the personal commendations of Nelson. He was subsequently made governor of New South Wales, and vice-admiral of the blue. He died at London in 1817. He was an active, persevering, and courageous officer, although, perhaps, somewhat exacting in his manner.

BLIND. The blind, as a class, are limited to such narrow spheres of action that those unacquainted with the subject fail to realize how large a number of the human race are deprived of sight. In the temperate regions of the globe about 1 in every 1000 of the population is blind, but in less favourable climates the percentage is much greater. When we consider what medical skill has already accomplished in Europe and America, not only for the relief but the positive prevention of blindness, we may readily conclude that in warmer and less civilized countries the class is more numerous and their condition more deplorable.

We rejoice that much can still be done by proper care and treatment to prevent blindness; for instance, ophthalmia of infants is a very common cause, and ought not to terminate in loss of sight, which in most cases results from neglect and dirt. Glaucoma is also a fruitful source of blindness, invariably causing loss of sight if left to itself; but, thanks to Professor Gräfe's brilliant discovery, these cases are generally curable if operated on early. Another very common cause of blindness is serious injury to one eye, which is thus lost, and if the injured organ be not at once removed, sympathetic inflammation and destruction of the other is very apt to follow, resulting in total blindness; whereas, if the injured eye be at once removed the other is generally preserved.

Loss of sight from small-pox is now comparatively rare, owing to the general practice of vaccination, but much undoubtedly may still be done towards diminishing the frequency of blindness by further advances in the art of treating eye-disease, and especially by spreading among all classes a knowledge of what has already been done in this direction.

It often occurs that children become blind through the most trivial causes by parents consulting unskilful practitioners. The improvement and increase in the number of well-regulated hospitals now makes it possible for every parent, however poor, to have the best medical advice and attendance.

In all ages of the world the blind have been the objects of pity and commiseration, yet it has only been within the past century that Christian civilization in its grand onward march has taken them in its embrace, and shed the influence of its light upon their midnight darkness. During recent years leading philanthropists have given much earnest thought to the best methods of ameliorating and improving the condition of the blind. Nearly all the European Governments and the States of the American Union have made liberal provision for their education and special training. In Great Britain the work has been left thus far to charitable enterprise. Much, however, has been done,—almost every large town having its asylum, workshop, or home teaching society.

The following summary, from *A Guide to Institutions and Charities for the Blind*, prepared by M. Turner and W. Harris in 1871, will show the state of these institutions at a recent date:—

"In the year 1800 there were only four institutions for the blind in the United Kingdom; during the next thirty years six others were added to the list; in the succeeding thirty years seventeen more were opened; while within the last ten years twenty new ones have been established, making a total now of fifty-three, without including societies for visiting the blind at their homes, and other charities.

Scotland with five institutions sold, in the last year of which we have any report, goods of the value of £21,930, while England with forty institutions only sold in the same period goods of the value of £33,598; and Ireland, only £454.

Scotland provides for, on an average, 76 blind in each institution; while England only provides for 43, and Ireland for 60.

The donations and subscriptions in Scotland for the same year amount to more than £20 per head of the number benefited; while in England they amount to about £21, and in Ireland to about £16.

So far as returns have reached us, it appears that Mr Moon's system of reading for the blind is adopted by 38 institutions and home-teaching societies, while only 22 use the books of other systems—Lucas's, 7; Roman, 4; Alston's, 4; Frere's, 3; Braille, 4. [Since 1871 the use of Braille has been introduced into many other institutions.]

Of the 30,000 blind in the United Kingdom, there are only about 2250 being instructed or assisted to work. The total amount received per annum for the benefit of the blind, according to the answers received, is about £66,000; besides, there are twelve societies from which no return has been made. Of institutions for the blind generally, we may remark that in each institution nearly the same difficulties appear to exist, the principal one being the difficulty of selling the goods manufactured at such prices as will secure a ready sale and cover the cost of production, and consequently in most instances there is a large surplus stock. In cases where the stock is wholly disposed of, our observations lead us to think that sales have been secured by selling at a loss.

The principal trades practised by the blind in the United Kingdom are the making of baskets, brushes, brooms, mattresses, rugs, mats, caning of chairs, with knitting and sewing for women."

Within a few years a great impetus has been given in England to the higher education of the blind, by the formation of the British and Foreign Blind Association, the establishment of the College for the Blind Sons of Gentlemen at Worcester, and the Royal Normal College and Academy of Music for the Blind, Upper Norwood.

The first-mentioned association "has been formed for the purpose of promoting the education and employment of the blind, by ascertaining what has been done in these respects in this and other countries, by endeavouring to supply deficiencies where these are found to exist, and by attempting to bring about greater harmony of action between the different existing schools and institutions.

"The founders of the association took as an axiom that in all questions which relate to obtaining impressions by touch the blind are the best judges; the council of the association therefore consists entirely of gentlemen who are either blind, or so nearly so that they have to use the finger instead of the eye for the purpose of reading.

"One main difficulty in the way of educating the young blind is the great cost of most of the appliances; this the council have endeavoured to meet by the manufacture of cheaper and better apparatus than any hitherto in use.

No one who has not made the attempt can have any idea of the extreme difficulty of combining great accuracy and durability with cheapness. This has been in a great measure accomplished as regards the Braille writing frames, which are now within the reach of every blind person who wishes to avail himself of the advantages of writing. The fact that a large number of these frames has been already sold speaks for itself, and, as the great majority of the purchasers are poor, the quick sale is evidence not only of the cheapness of the frames, but also of the widespread desire for self-education existing among the blind.

"Another obstacle to the diffusion of the knowledge of the Braille system has been the absence of printed books in English. With the view of meeting this want one of the council has perfected the process of stereotyping used in France, by which the cost of production of stereotype plates is greatly reduced; and as the blind can themselves produce these plates, a new and remunerative means of employment has been discovered. Some school books have already been issued by the association, and will shortly be followed by others. The work on the *Education and Employment of the Blind*, by the honorary secretary, has been published under the sanction and at the expense of the association."

The following extract from an address delivered by the honorary secretary before the Society of Arts on the various types for the blind, shows how thoroughly they are investigating the subject:—

"The happy idea of printing on paper letters recognizable by the touch is due to M. Haüy of Paris, who printed his first book in 1784, and founded the Institut des Jeunes Aveugles, Paris. The type he adopted was the script, or Italic form of the Roman letter. This was introduced into England by the present Sir C. Lowther, who printed the gospel of St Matthew in 1832 with type obtained from Paris, and followed it with other portions of the Bible. In 1834, Gall, of Edinburgh, printed the gospel of St John in Roman capitals, in which, however, all curves were replaced by angular lines, and the lines themselves were serrated, which changes, he believed, gave greater distinctness to the letter.

Alston, of Glasgow, adopted Fry's plan of using ordinary Roman capitals. Dr Howe, of Boston, U.S., makes use of the small Roman letters, giving them angularity according to Gall's idea.

The Philadelphia type does not differ much from Alston's. The combination of capitals with small letters has also been tried, and a society has recently been formed at Worcester with the intention of printing on a large scale in this type. In Germany various modifications of the Roman letter exist, the principal of which, the so-called Stachelschrift of Stuttgart, consists of Roman capitals formed by finely dotted lines. All these modifications are suggestive of the strong tendency among those who have attempted to benefit the blind to retain for them the form of letter to which the seeing are accustomed, while the constant change of form indicates a fact with which most blind persons are familiar from personal experience, viz., that none of these modifications are satisfactory as to the primary condition of being easily felt. A better form than any which has obtained currency was suggested twenty years ago by Mr Welch, a blind man, who has been the pioneer of education amongst the blind of London, and this is almost identical with one independently worked out by Mr Littledale of Cheltenham.

The second great class is made up of alphabets deviating more or less widely from the Roman letter, and consists of a stenographic shorthand invented by Mr Lucas, a phonetic shorthand due to Mr Frere, and a full written system introduced by Mr Moon, in which the Roman letter is retained in a more or less modified form whenever he considered this could be done compatibly with easy recognition, the simple line-signs employed by Mr Frere being used to replace the more complicated of the Roman letters. It will be necessary to examine these systems in detail, and it will facilitate this examination if we compare them with each other in the following particulars:—(*a.*) As respects the shape of the letter; (*b.*) As respects the advantage of conformity with the Roman letter; (*c.*) As regards the reading from right to left and from left to right alternately; (*d.*) Advantage of a shorthand as contrasted with a full written system

(*a.*) *As respects the shape of the letter.*—Mr Lucas and Mr Frere brought out their systems about the year 1838, Lucas preceding Frere by a few months. They employed at first almost identically the same characters, but unfortunately could not agree to represent the same sound by the same symbol. Mr Frere had the advantage of having his plan carried out by a very ingenious and sensible blind man, who soon discovered that the letters formed by lines and curves upon which dots were placed were too similar to those formed by the corresponding lines and curves without dots; he, therefore, changed all his dotted characters, replacing the dotted curves by angles of 45°, and the dotted lines by lines in which a short line is substituted for the dot.

The result of this change is, that Frere's character is now far superior to Lucas's in the quality of easy recognition. Mr Moon's character, in the large size which is used by him, is quite as easily distinguishable as Frere's, but in the form in which he now prints his characters, his right-angles are not true right-angles, but are rounded. In the size which he uses, this defect is of very little importance, but it effectually prevents any considerable diminution, because, if this is attempted, the rounded right-angles cannot be distinguished from the hooked lines.

The importance of using a character as small as is compatible with easy recognition may be readily understood from the following statement:—The largest type used by Mr Frere is that employed in the gospel of St John. The character is 4½-sixteenths of an inch long, and is about the same size as Moon's character. The pages occupied by the gospel of St John in Frere are 96. In his medium type, in which the length of the letter is 4-sixteenths of an inch, the same matter would go into 67 pages; and in his smallest type, in which the length of the letter is 3¼-sixteenths, it would occupy 46 and a third pages. It has been found, by an experience extending over 27 years, and embracing many hundreds of individuals of all ages and conditions, that all those who can read the largest type can read the medium, and almost all can read the smallest.

The medium type is very generally preferred, as being more pleasant to the finger, and many with delicate touch prefer the smallest for the same reason. Thus it will be seen that, by selecting a well-devised character, not only can a very considerable saving be made in the size, and therefore in the cost of books, but by a diminution of size, within certain limits, the character is rendered absolutely more legible. The gospel of St John, in Moon's type, occupies 140 pages.

(*b.*) *As respects the advantage of conformity with the Roman letter.*—Much has been said and written on this subject. A favourite argument with the advocate of the Roman letter is, that by its use a blind man can be assisted in his reading by those around him who are possessed of sight. This, no doubt, would be valid if no simpler character for the blind had been invented, but when we have to choose between a character in the reading of which the blind can be assisted by the seeing, and one which is so simple that no assistance is required, there can hardly be a doubt as to which ought to be used.

Another plea for the use of the Roman letter is, that by its means the blind can write in a character understood by everybody. This writing is, as we shall presently see, a very imperfect process; but this argument is undoubtedly of some weight. These remarks apply simply to the existing systems in which the Roman letter is employed. It is probable that a much more legible alphabet might be constructed, but, after our 96 years of experience and experiments with the Roman letter, another failure may well be feared. The small angularized Roman letter of Dr Howe, of Boston, which is used in most of the schools of the United States, is probably as good a form as any, and if printed in a larger size would not be difficult to feel; in its present size, however, it is far too small, and has signally failed in America. The American schools are all State institutions, and have to furnish accounts to their respective State Legislatures of the work done by them.

Out of 664 pupils in seven schools, where the Roman character of Dr Howe is used, one-third learn to read fluently, one-third by spelling, while none fail; and it must be borne in mind that those who learn to read by this system also acquire an admirable method of writing. Moon's system retains those Roman letters which can be easily distinguished, and thus makes a transition between the systems in which the Roman character is used and those which employ purely arbitrary signs. For this reason, and from its great simplicity of construction, it is more easily learned than any other, and therefore is well suited to the great mass of the poor, who from want of intelligence or of application cannot learn one of the shorthand systems. Its great bulk, however, involving costliness of production and comparative slowness of reading, is a serious obstacle to its general use.

(*c.*) *Reading from left to right, and from right to left, alternately.*—In Frere's system the lines are read from left to right, and from right to left, alternately, an arc of a circle taking the finger from the end of the upper to the beginning of the lower line. The plan may be illustrated by imagining the letters to be fixed on the upper edge of a long string. Let it be supposed that this string is doubled backwards and forwards upon itself in such a way that the letters always occupy its upper edge. This will give a good idea of Frere's method of reversing the line; not only is the line reversed, but every letter in it is also reversed, so that the finger, when

moving forwards, whether towards the right or towards the left, meets the characters in the same position, and is, in fact, never moving backwards, in the same manner that a person may walk to the end of a room, turn and walk back, yet is moving forwards in both directions. Moon, on the other hand, while borrowing the reversal of the line from Frere retains the letters in the returning line in the same position as the advancing, so that the finger in the return line meets the characters in the opposite direction from that in the advancing line; and to those accustomed to Frere's simpler method of reversal an unpleasant feeling is produced, exactly comparable to walking backwards.

The following example of both modes of reversal, in which Roman Capitals are used, will make this clear:—

Frere's Method.

I WILL MAKE DARKNESS
MEHT EROFEB THGIL

Moon's Method.

I WILL MAKE DARKNESS
.MEHT EROFEB THGIL

No doubt habit will accustom a reader to either plan, and probably there is not much difference in the difficulty of either, but, as we shall see by-and-by, it is absolutely necessary for writing that the pupil should thoroughly understand that, whichever way he goes, he is moving forwards; it is, therefore, wise to accustom him in reading to a process which he will have to follow in writing. Opinions differ widely among the blind whether it is best to read forwards in one direction and backwards in the other, or forward in both; it seems, however, among those who have had experience of the return line, that there can be no doubt of its great value, as by its use no time is lost by the reading finger having to return from the end of the upper to the beginning of the lower line, and the setting free of the left hand enables it to follow the right in reading, to take its place, or to rest.

(*d.*) *Shorthand.*—By a shorthand system, reading is more rapid, and a nearer approach is made to the way in which the eye takes in a whole word at a glance, than in a full-written system. The books are also more manageable and less costly, but the stereographic method is distinctive of correct spelling, and in the phonetic method this is not even attempted; yet it is advisable, for many reasons, that the blind should be able to spell. The shorthand systems seem therefore to be of the same use to the blind as to the seeing—not being of universal application, but extremely useful to those who have to read much.

In all the systems which we have hitherto considered, the letters, whether Roman or arbitrary, are formed by raised lines. The method employed for writing them is as follows:—Small cubes of wood are used with projecting pin points, so placed as to assume the form of each letter. The paper to be written on being laid on a soft surface, the pin-point letters are pressed into it; each point carries some of the paper before it, forming a little prominence on the reverse side, and as the pin points are very close together, the series of little prominences formed by them feel to the fingers like serrated lines. This plan ought rather to be called printing than writing. It requires great practice, and is at the best very slow and imperfect; yet it has its uses, as by employing Roman capitals the blind can correspond with the seeing. The letters, however, are not sufficiently distinct, and communications from blind correspondents written in this manner, or with pencil, are less satisfactory, both to writer and reader, than if the letter had been written from dictation. Printing from the Roman letter (not embossed) can be effected by the blind, with considerable rapidity, by means of Hughes's typograph or Foucault's writing-machine; but the blind writer cannot read what he has written, and the apparatus is so costly that it is not procurable by the poor.

[A new machine called 'the type-writer,' has lately been invented in America. It is largely manufactured, and is coming into general use for the seeing. It is equally well adapted to the use of the blind, is very simple, and can be manipulated very rapidly. A skilful operator can write at least twice as fast as an expert penman. It is not only a valuable invention, but one superior to all others of the kind.]

Various plans exist to enable the blind to keep their lines when writing with a pencil or with a stile on carbonized paper, but such writing can only be used for correspondence with the seeing, and cannot, of course, be read by touch.

We come now to the third class of systems, viz., those in which the letters are formed by a combination of dots. These are:—

1. The Braille system, universal in France, both for writing and printing, and very much used for both purposes in Switzerland, and employed as the *written* character in almost all countries, with the exception of the United Kingdom.

2. The Carton type, which was introduced into Belgium by the Abbé Carton.

3. Hughes's system consists of large and small dots, and lines placed in different positions. It never obtained much currency, and seems never to have attracted the attention which its ingenuity merited.

4. A modification of the French method has been lately proposed in New York, and seems to have much to recommend it.

To begin with the French method. This was invented in 1834 by M. Braille, a blind pupil of the *Institut des jeunes Aveugles*. It spread with great rapidity, and has, as we have before seen, become almost the universal written language of the blind. Its signs are purely arbitrary and consist of varying combinations of six dots placed in an oblong, of which the vertical side contains three and the horizontal two dots. For writing, a frame is used consisting of a grooved metal bed, containing ten grooves to the inch; over this is fitted a guide whose vertical diameter is $\frac{7}{10}$ inch, while the horizontal diameter is $\frac{7}{8}$. This perforated guide is fixed into a light wooden frame, like the frame of a slate, which is attached to the grooved metal bed by hinges. The paper is introduced between the frame and the grooved bed. The instrument for writing is a blunt awl, which carries a little cap of paper before it into the grooves of the bed, thereby producing a series of little pits on the side next the writer. When taken out and turned over, little prominences are felt, corresponding to the pits on the other side. The reading is performed from left to right, consequently the writing is from right to left; but this reversal presents no practical difficulty as soon as the pupil has caught the idea that in reading and writing alike he has to go *forwards*. The brass guide has a double row of openings, which enables the writer to write two lines; when these are written, he shifts his guide downwards until two little pins, which project from the under surface at its ends, drop into corresponding holes of the frame, when the writer writes two more lines, and this operation is repeated until he arrives at the bottom of the page.

The first ten letters, from 'a' to 'j,' are formed in the upper and middle grooves; the next ten, from 'k' to 't,' are formed by adding one lower dot behind to each letter of the first series; the third row, from 'u' to 'à' is formed from the first by adding two lower dots to each letter; the fourth row from 'â' to 'w,' similarly, by adding one lower front dot.

The first ten letters, when preceded by the prefix for numbers, stand for the nine numbers and the cypher. The same signs, written in the lower and middle grooves, instead of the upper and middle, serve for punctuation. The seven last letters of each series stand for the seven musical notes—the first series representing quavers, the second minims, the third semibreves, the fourth crotchets. Rests, accidentals, and every other sign used in music, can be readily and clearly expressed, without having recourse to the staff of five lines which forms the basis of ordinary musical notation, and which, though it has been reproduced for the blind, can only be considered as serving to give them an idea of the method employed by the seeing, and cannot, of course, be written. By means of this dotted system a blind man is able to keep memoranda or accounts, write his own music, emboss his own books from dictation, and carry on correspondence.

But this French system, though extremely useful, is not perfect. The letter is too small for ready recognition by the unskilful or hard-handed, and if this is sought to be remedied by increasing the size, the reading finger does not cover the whole of the letter, and has to proceed up and down, feeling out each letter, instead of following the even gliding motion essential to good reading. The modification proposed in New York remedies this defect, though this does not appear to have been the intention of its promoters. It proceeds on the principle that the letters occurring most frequently in the English language should be represented by the fewest number of dots, and that the letters should be so spaced that a letter composed of one dot should not, as is the case in the French system, occupy the same room as one with six dots. For this purpose the oblong, consisting of six dots, composing the root-form of the letter, is placed horizontally instead of vertically, the greatest vertical depth of any letter in two dots instead of three. From these two changes results a saving of about one-third in space; this involves a saving of about one-third in the price of printed books; writing is rendered more rapid; and as the size can now be increased, owing to the diminution of the vertical length of the letter, it can be made sufficient for the dullest touch. Ten-word and part-word signs have been introduced, which effect a further saving of nearly one-third, while they do not interfere in the least degree with correct spelling. These advantages make it well worth while to consider whether the modification of the Braille system ought not to be adopted as the written system of all English-speaking blind; but before such a step is recommended, the question should be carefully considered in all its bearings on musical notation as well as on ordinary writing."

Worcester College.

Regarding the Worcester College for Blind Sons of Gentlemen, founded in 1866 by the Rev. R. H. Blair, the Report informs us that—

"It was opened with the view of giving to families of the better class an opportunity of educating their children in a systematic manner, with a due regard to home comforts, and with surroundings befitting their position.

The course of education projected by Mr Blair was such as would convert the pupils into intelligent home companions, if no other object were desired. But a conviction, based on personal knowledge, that the blind were capable of the highest competition with the seeing, lay at the root of this gentleman's endeavours. Self-helpfulness and usefulness in the ordinary affairs of life is therefore but one of the first results which reward the teaching of the blind; and it appears that blind men can be made reproductive also, not only in the particular instance, but in the bulk, and that the arts of teaching and lecturing, acting as deputations, translating, presiding over blind or other institutions, the law, and in the most favoured cases the church, are fully within the capacity of the well-educated blind. A prejudice has hitherto existed against the employment of blind men, owing to their supposed incapacity, and certain other drawbacks resulting from neglect. Let this impression be removed, and there will be an increase in the number of positions open to them.

For an entrance into these walks of life, the training must be such as to enable its recipients to compete for university distinctions. The objections to this course, if they are entertained, will be removed by a little reflection on the nature and uses of a university; and the difficulties which in the idea of inexperienced persons a blind man has to overcome, are greatly diminished by being met and grappled with in early years, and are actually being materially lessened by the earnest efforts now made by blind instructors and investigators.

It is impossible to rule definitely at what age the school education of a child born blind should begin. Children vary as much in natural quickness as parents in the power of educating. A quick and resolute child will, through the clumsiness of nurses or the carelessness of a parent, early acquire tricks which it takes years to eradicate, and acquire habits and ways of thought and action which may have a profound effect on his after life. The sooner, therefore, a child can consistently with his health and other considerations be admitted to cheerful and active society, where his character can have free play and find sympathy, yet be quietly trained, the more easy will his education be afterwards. For those who have become blind from accident or disease, in childhood or towards the age of adolescence, one word of advice may be given. As soon as it is ascertained that the blindness is past remedy, the child should be sent to school, so that the habit of study may be remitted as little as possible. It is in the highest degree impolitic to allow the faculties to degenerate through several years' disuse, as is often done; and it is in reality kinder to a child or youth to send him away to pick up strength and consolation by the example of his cheerful and patient fellows, and to distract his grief by learning the instruments which he will ultimately need in his education, than to keep him in the indulgences of home, brooding over his misfortune, or buoyed up by a hope which will not be realized.

No claim to exclusiveness is asserted in the use of English types. There are useful works to be found in all; and when a pupil arrives who has been educated in one or other form of type, he is never discouraged from its continued use. But as uniformity of class-books is desirable, and one system must be employed as a basis, the Roman form, in which are printed books suitable for higher education, is adopted for class purposes. Dr Moon's type is read by some for recreation or private study, and the American Bible, which is the most portable yet printed, and is beautifully executed, is read by those whose dexterity, acquired by long practice, enables them to master this somewhat difficult, because small, type. After some years of practice the desire for smaller type seems to become a passion for those possessed of a quick and nimble touch.

Dr Moon's type is large and easy, and comprises the Bible, Prayer Book, and a large number of religious and devotional works, together with numerous stories, biographies, and other works suitable for the young and aged. Dr Moon has also several educational works of a very useful character; but his plan of action has not yet led him to enter largely into the production of higher literature."

The Royal Normal College and Academy of Music for the Blind has for its object the affording of a thorough general and musical education to the youthful blind of both sexes who possess the requisite talent, so as to qualify them for self-maintenance. The Report of the institution states that

"As without previous trial it would in many cases be difficult to determine whether an applicant for admission has sufficient capacity for the kind of education given at the college, candidates will first be received as *probationers* for a term of three months, or less. If, at the end of that period, they are found to possess adequate ability, they may become permanent pupils.

With a view to adapting the methods of instruction to pupils of different ages and capacities, the following classification has been adopted, viz.:—A. The elementary section, the instruction in which is designed especially for children from seven to nine years of age; B. The intermediate, for pupils from nine to twelve years of age; C. The junior, for pupils from twelve to fifteen years of age; D. The senior, for pupils from fifteen to twenty-one years of age. Exceptional cases over twenty-one years of age can only be admitted by special vote of the committee.

The college embraces three distinct departments—1. General education; 2. The science and practice of music; 3. Pianoforte tuning.

The department of general education embraces all the ordinary branches of a sound English education. Special care is bestowed on the intellectual training of the pupils; for experience has shown that in order to qualify the blind for self-support, it is essential to afford them a thorough *general* as well as musical education.

In the musical department both vocal and instrumental instruction is given, according to the improved methods which have been employed during late years with marked success in the leading institutions of France and America. This department embraces the culture of the voice, the study of the piano, organ, and other solo instruments, harmony, counterpoint, composition, the history of music, and the art of teaching.

In the department for training the pupils in the art of regulating and tuning pianos, pupils are instructed who have passed the age at which they might have become qualified for remunerative employment in other departments. Though a superficial knowledge of the art of tuning may be readily acquired by those deprived of sight, a prolonged course of careful training is necessary in order to enable them to become thoroughly successful.

Experience has shown that the blind can seldom fully support themselves merely by *manual labour*, and the great majority of those who have been trained to industrial trades continue to require charitable assistance during their whole life.

It is well known that many of the blind possess musical talent, yet only a small number in the United Kingdom have ever been qualified to earn their living by the profession of music.

Such was formerly the case in other countries, but during recent years great improvements in the general and musical education of the blind have been effected abroad, particularly in France and America, and large numbers of this class educated in the institutions of those countries have been enabled to maintain themselves fully by various pursuits, especially as skilled organists, teachers, pianists, and pianoforte tuners.

In view of the practical results of the improved education of the blind in other countries, the Normal College and Academy of Music was founded in order to afford similar advantages to the youthful blind of the United Kingdom.

The college was opened in March 1872, under the direction of a committee, including members of the governing bodies of various metropolitan societies and institutions for the blind, with an experienced principal, and a staff of highly-trained teachers.

Upwards of seventy pupils from London and other large towns have been under instruction; a number have already left the college, and are now regularly employed as thoroughly competent pianoforte tuners."

As it will be impossible in this article to give any lengthened account of the institutions on the Continent and in America, we will briefly sketch the plan of working in a few of the most progressive.

The following extracts from addresses delivered at the first European Congress of Teachers of the Blind at Vienna in 1873, will best give an insight into the schools of Saxony:—

Herr Reimer, superintendent of the *Preparatory School for the Blind* at Hubertusberg, pointed out that, "even among the families which are not very poor, blind children often grow up without learning to wash or feed themselves, with hands hanging soft and helpless at their sides, and thus become more incapable than the poorest, who are forced to exert themselves by the necessity of the case.

If they are not taught to help themselves at home, it is very difficult to teach them at school, and as the existing blind institutions cannot admit young children without injuring the education of the older ones, they ought to be taught in preparatory schools or Kindergärten separately, which should be established by the State.

In the preparatory school at Hubertusberg in Saxony, the first thing aimed at is the strengthening of the limbs, then to make the children use them properly, to make them help themselves instead of relying on others, to correct their bad habits and to improve their mental condition, arousing in their minds the love of God and of truth as well as conscience. All this must be done methodically, and each lesson must be given separately and repeatedly as well as most patiently.

The change wrought thus is wonderful, if the teachers are experienced. They must be encouraged to move about as directed, and the 'Fröbel play and exercises' will be found useful. Plaiting