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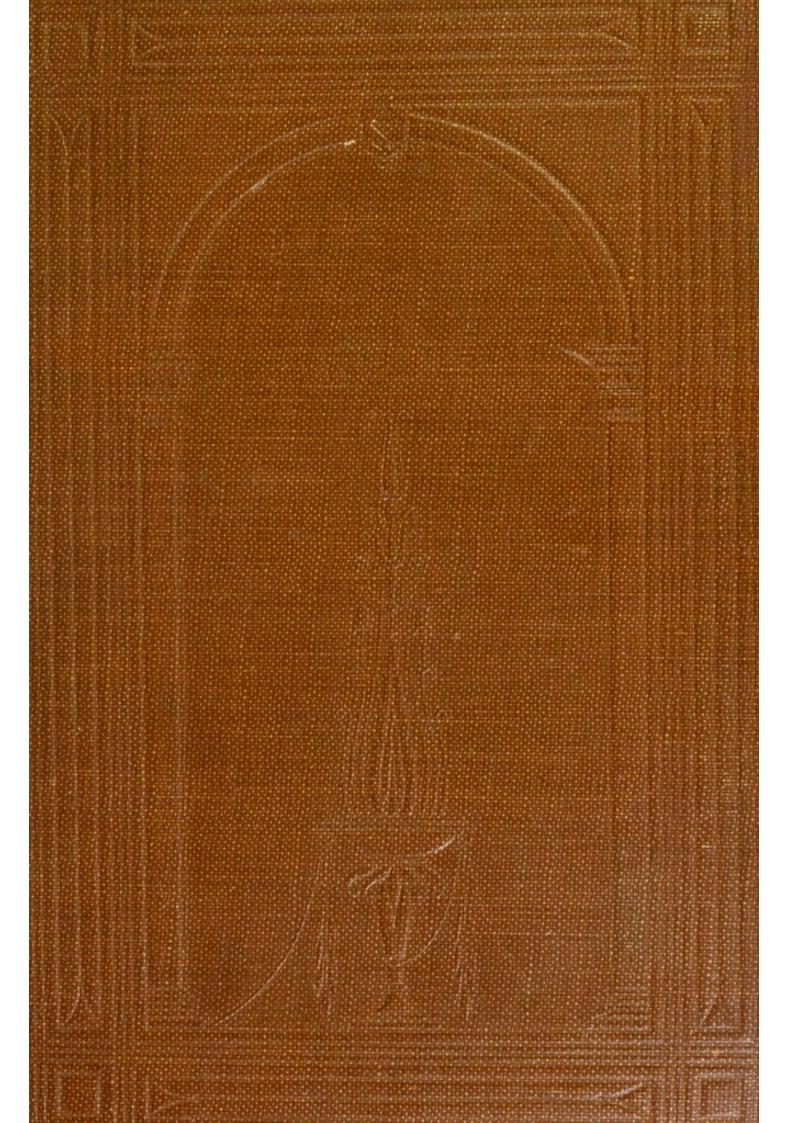
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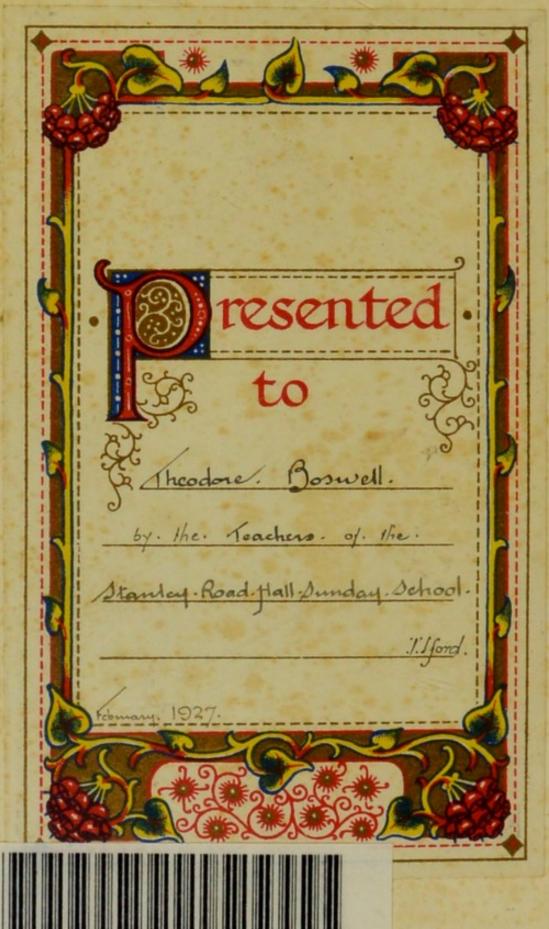
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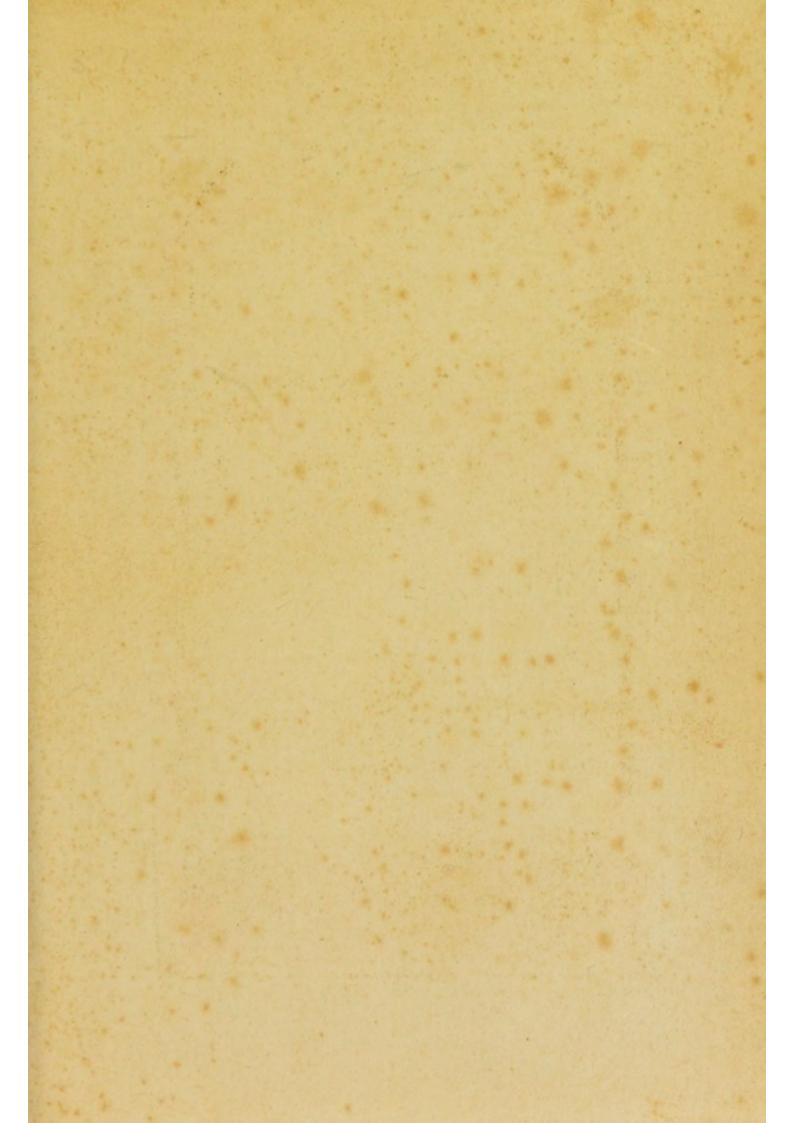
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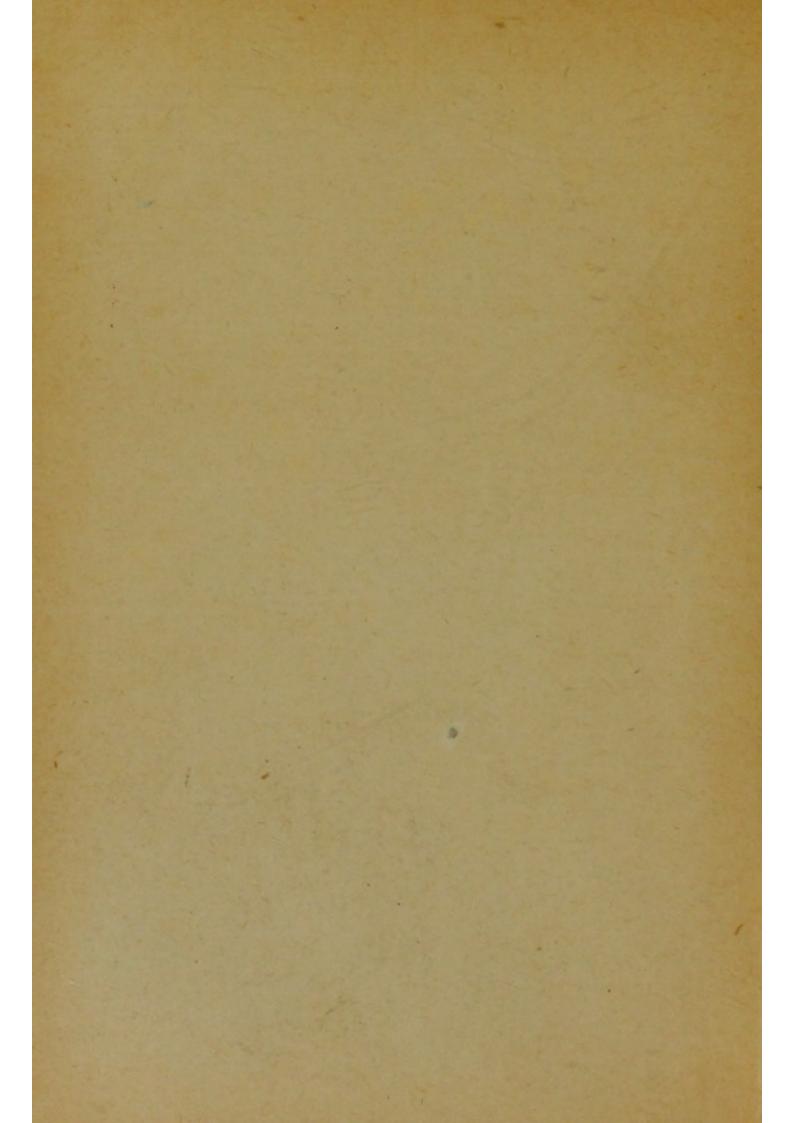


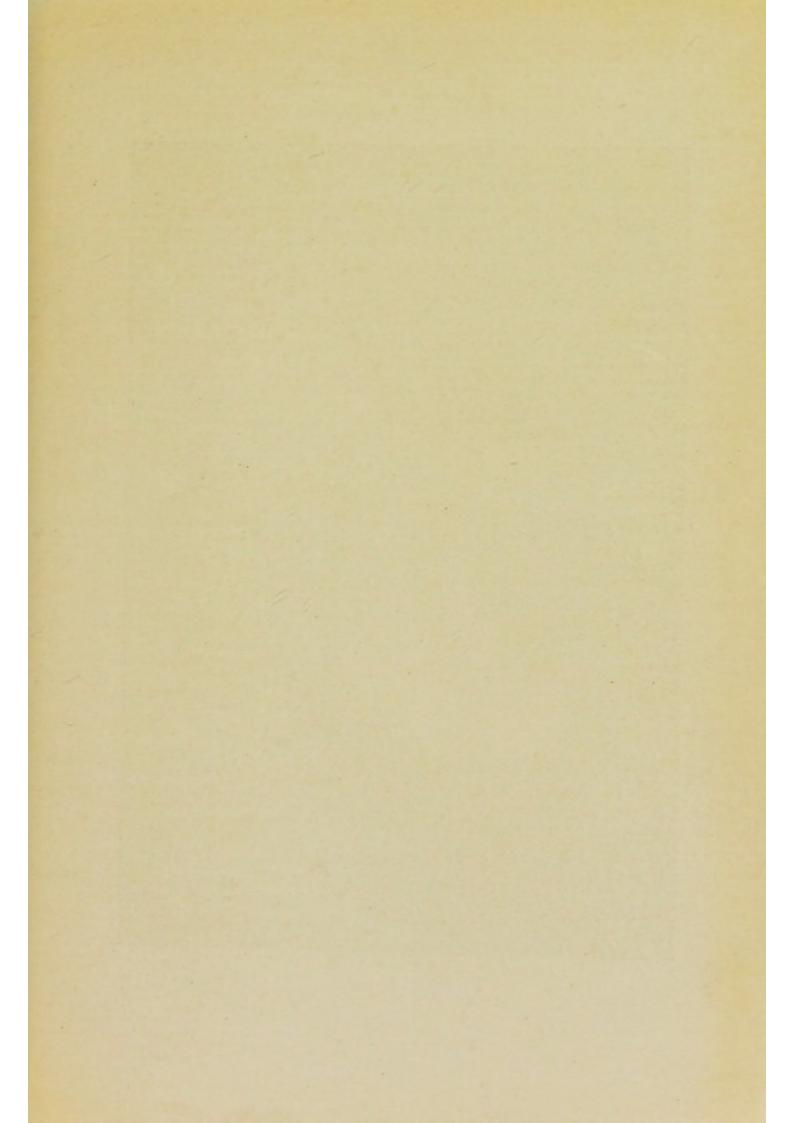
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HEROES OF . . THE DARKNESS







HELEN KELLER AS AN ART CRITIC.

often constrained to exclaim, 'She sees more with her fingers than we do with our eyes!" " So exquisitely sensitive is her touch, and so quick and true her perceptions, that people are

BY

JOHN BERNARD MANNIX

WITH FORTY-FIVE ILLUSTRATIONS
INCLUDING TWO IN COLOUR

London

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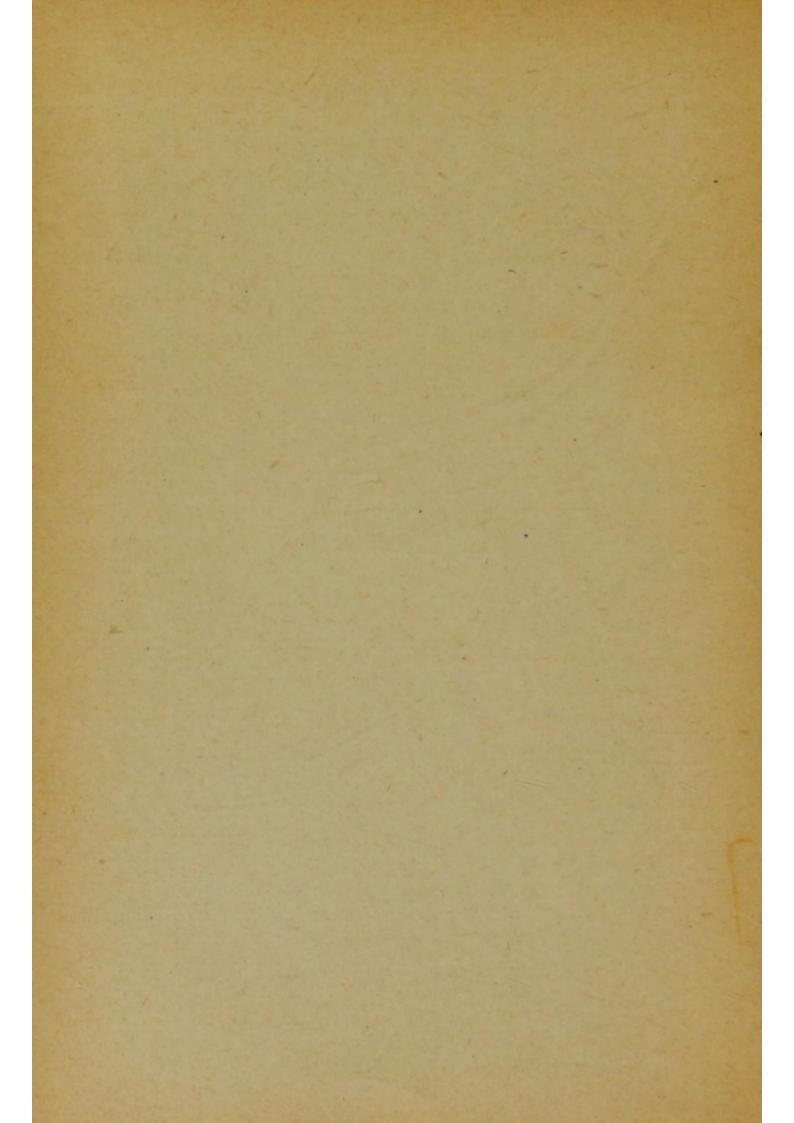
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FOREWORD

DEALING with a subject, the romantic and dramatic possibilities of which have attracted such eminent writers as M. Maurice Maeterlinck, Mr. H. G. Wells, and Mr. Rudyard Kipling, this volume of studies from real life claims to be nothing more than a simple examination of one phase of the foundation of reality which should underlie all that is best in the world of imagination.

Most of my readers live in a world of light and colour, the beauty and value of which they seldom pause to realise. But there is in this world of ours a kingdom of which they have probably never even heard. As old as human history, this kingdom has no frontiers, its subjects know no distinctions of race or colour, caste or lineage. It is an empire of darkness, though upon its citizens the sun is ever shining. Yet to these sons and daughters of men there is neither light nor colour in life. They live in lifelong gloom, for theirs is the kingdom of the blind.

True, blindness is primarily a physical deprivation, and as such may be regarded simply as an obstacle to be overcome, as a stimulus to effort. But the loss of sight more than any other affliction is a test of the temper and mettle of a man, of his will to live and do, of his faith and hope in the future. It is in the

kingdom of the blind that the triumph of man's highe nature and powers over adversity and despair is most strikingly and heroically manifested. Out of the darkness of their world have emerged many heroes. Those of us who live in a radiant and multi-coloured universe would faint and falter under the burden of such a misfortune as that of blindness, and yet, as Milton proudly said, "It is not so wretched to be blind, as it is not to be capable of enduring blindness."

Right down through the ages, and in most of the countries of the world, the blind have been considered, with the exception of a few outstanding and heroic figures, as objects of charity, of pity, and even of contempt. In our time the world is beginning to learn that the blind, as such, are not disqualified from sharing the duties and responsibilities, the innocent pleasures, and the highest rewards of our common humanity.

Harking back to classical times, we find, besides the titanic figure of blind Homer, half-veiled in the mists of antiquity, other notable blind men in Didymus of Alexandria (mentioned by St. Jerome), and Democritus, whom Tully said put out his eyes in order to be able to think the more intensely. Later, in the Far East, there was the Japanese Prince Hitoyasu, whose ninth century bounty was the means of helping his afflicted brethren until Western ideas intervened. Mediæval Europe saw at least two picturesque figures who, though sightless, played heroic parts on the field of battle. The first was John, the blind King of Bohemia, who fell fighting valiantly at Crécy, and whose coat of arms was popularly supposed to have been adopted by the Prince of Wales. The other was John de Trocznow or Zisca,

who, despite the loss of first one eye and then the other, led the Bohemian reformers to victory. Minstrelsy, too, has been a recognised calling for the blind in all periods. The name of Blind Harry, the fourteenth century poet and minstrel, is famous in Scottish annals, as are those of Carolan and Raftery in the later history of Ireland.

That there have also been noble and heroic figures in the ranks of the blind in more modern times, it is one of the purposes of this volume to prove. Here are presented in brief the life-stories of a representative and carefully selected group of men and women whose lives have been overshadowed by blindness, but who, never theless, by innate genius or sheer force of character, have heroically fought for and attained fame or success in various walks of life. Rising superior to the limitations of their common affliction, they form a living chain of heroes and heroines of the darkness from Helen Keller back to Milton!

Considered as archtypes, each one belongs to a distinct department of activity or school of thought, and personifies some abstract quality or dominant characteristic. Thus Milton, the English Dante, might be said to personify the divine afflatus; Saunderson, the sightless mathematician, would stand for lucidity and concentration; Huber, the naturalist, though blind, represented observation; Henry Fawcett, the statesman, resolution; Laura Bridgman, receptivity; and John Metcalf and Sir Francis Campbell, different phases of the more purely physical attributes of daring and enterprise. But such classification may be considered more arbitrary than scientific.

On the other hand, the subjects treated may be taken

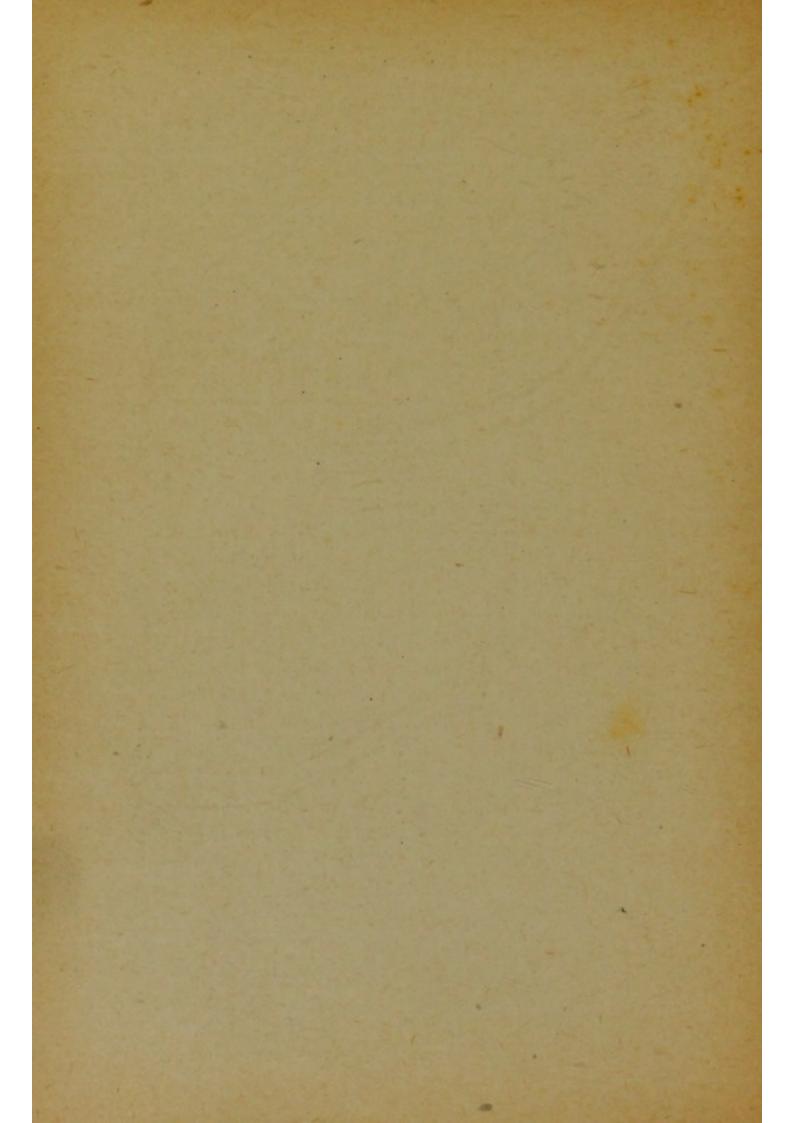
as illustrations of varying aspects of the psychology of blindness and its effects. Where these effects are negative or repressive, as, for instance, in the natural timidity of movement so noticeable in the blind, they can be overcome by training or the exercise of the will. Striking evidence of this will be found in the lives of Metcalf, the blind road-maker; James Holman, R.N. (1787-1857), the blind traveller; and Sir F. J. Campbell, the famous blind teacher, happily still with us. Then there are examples of what might be called the compensations for loss of sight. Increased powers of concentration are certainly a concomitant, and as a secondary result there is an improved retentiveness of memory. The apparent improvement in the acuteness of the other senses so often remarked in blind people is usually only the result of greater attention being concentrated on those senses. They are, for instance, more dependent on the sense of hearing than sighted people. Though a trained ear does not make a musician, the blind more than hold their own in the art of music, as the career of such men as John Stanley will prove. As to whether blindness limits the powers of imagination, or proves or disproves the existence of innate ideas, a great controversy raged round the descriptive poetry of Dr. Blacklock, the blind friend and patron of Burns and Scott, and the scholarly lectures of Professor Saunderson. Loss of sight did not prevent Leonhard Euler, the astronomer, or François Huber, the famous Swiss authority on bees, from pursuing their splendid work for science. In short, given the man of strength of character and of will, even if he be blind, he has in him the seeds of success, the making of a hero—a sightless superman.

That the position of the blind has been greatly improved in modern times is undoubted. Sympathy in its truest and best form, that of helping the sightless to help themselves, is largely a product of modern philanthropy and humanitarianism, allied to improved educational methods. An awakening civic consciousness is causing the State to realise its responsibilities for its disabled citizens. In 1784 Valentin Hauy had the first books printed in raised characters for the blind, and founded the parent Institution Nationale des Jeune Aveugles. The example of this great apostle of the sightless was quickly followed by philanthropists in England and America. Of the later developments of the education of the blind, space does not here permit more than passing mention. Some ideas on the subject may be gleaned from the lives of Laura Bridgman, Helen Keller, and that pioneer of the strenuous life among the blind, Sir Francis Campbell.

In conclusion, it is hoped that this modest collection of stories of darkened lives will commend itself to those who sympathise with, and find a message of hope in the triumph of human nature over adversity and affliction. I trust, too, that my blind friends will find in these biographies of their gifted brethren a source of encouragement and inspiration.

With regard to the authorities consulted, it is not possible even to summarise them here. For the most part they are mentioned in the text, and to the authors and publishers I beg cordially to acknowledge my indebtedness.

J. B. M.



HELEN KELLER: A GENIUS

THERE was sufficient truth in the characteristic remark of the late Mark Twain, that the two most interesting characters of the nineteenth century were Napoleon and Helen Keller, to appeal to the imagination and to live in the memory. The apparently random shafts of genius often strike nearer the truth than our own most laboured approximations, and the buttoned rapier of a shrewd wit than judicial and more or less invidious comparison. Napoleon Bonaparte set at nought the frontiers of Europe and set out to conquer the world. Helen Keller triumphantly overcame the barriers of her imprisoned senses, and brought a sympathetic world to her feet. That she, being blind, should be alive to the light, and colour, and beauty of life; being deaf, should still hear the music of the spheres—these were not the greatest marvels, for Laura Bridgman had trodden the path before her, though haply not so far. But that she, being dumb, should speak-having lost the three senses of sight, hearing, and speech, should still surpass in intellectual attainments many of her brothers and sisters blessed with all their senses! It is such marvels as these that have so impressed the popular imagination as to make the name of this young American girl of world-wide renown.

The story of Helen Keller's dawning consciousness, of her gradual awakening from the living tomb of silence and darkness in which she was immured, makes a psychological study of intense human interest, and the narrative of the faltering steps by which she ascended the heights of knowledge of self, of the Creator, and of the universe is unusually fascinating.

Helen Keller was born near Tuscumbia, a little country town in Northern Alabama, on the 27th June, 1880. As an infant she was taken to live in the tiny summer-house covered with vines, climbing roses, and honeysuckle, which, as is not unusual in the Southern States, was built near the family homestead. Here in the little arbour, whose porch was almost hidden by a screen of yellow roses and southern smilax, and was fragrant with the scent of mimosa, the infant Helen spent the first nineteen months of her life, until the illness came which deprived her of sight and hearing. She was fast learning to toddle and to lisp the childish prattle so dear to a mother's heart. Then she was stricken down with an acute attack of congestion of the stomach and brain.

Her recovery was rapid enough, but was only partial. Never again was she to see the light of heaven or to hear the voices of her loved ones. Her childish body became an earthly prison for the faculties of her soul. Helen's earliest memories and first impressions are of necessity vague and elusive. The sensation of light was only dimly present, and pained her infant eyes until it gradually merged into lifelong darkness and gloom.

Little Helen ceased to speak because she could not hear. The poor little mite, silent and at first helpless,

sat in her mother's lap, or clung to her dress as she moved about on her household duties. By and by she began to feel the necessity of communicating her wishes and requirements to others. A series of signs and gestures grew to be the natural expression of her desires between herself and the members of her family. She shook her head for "no" and nodded for "yes." A pull meant "come," a push "go," and so on. Some of the signs were based on imitativeness. Thus, if she wanted bread and butter, she would imitate the process of cutting and buttering the slices, or if she wanted ice-cream, she would pretend to be working the freezer, and shiver to indicate cold.

Helen soon understood a good deal of what was going on around her. She could tell by her dress when her mother was going out, and always begged to be taken with her. At the age of five she learned to fold and put away the clothes when they were returned from the laundry, and she could easily tell her own garments from those of the others. Her ability to perform such tasks, however, she afterwards ascribed simply to imitation.

There came a time when Helen began vaguely to realise that she was not like other people. This was before her teacher came to her. She noticed that her relatives and friends did not make signs as she had to do. When they wanted to tell one another anything, she found that they talked with their mouths. Sometimes she stood between two friends or relatives who were talking, and touched their lips. She could not understand what they were doing, and was vexed. Occasionally she would move her lips, too, in mute and ineffectual imitation. She would also gesticulate frantically, but, of course, unavailingly. At times this

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made her so angry that she kicked and screamed passionately until she was almost exhausted.

Her ungoverned impulses made Helen a wayward and wilful little girl. She sometimes kicked her nurse in her fits of temper, confessing afterwards to a vague feeling akin to regret, which did not however prevent her from doing the same again. Of active and adventurous disposition, she used to roam about the garden and stables just like any sighted child would do.

One day she found out the use of a key, and locked her mother up in the pantry. There Mrs. Keller was obliged to remain for three hours, until the servants, who were in another part of the house, came to her assistance. She kept thumping and kicking at the door, while Helen sat on the steps and laughed in her strange, voiceless way, as she felt the concussion of the knocking. It was such naughty pranks as this that made the deciding factor in resolving Helen's parents to secure a teacher for her.

About the year 1885, the Keller family, consisting of Helen, her father and mother, two elder half-brothers, and an infant sister Mildred, moved from the little vine-covered house to a large new one. Miss Keller has written that her earliest distinct recollection of her father was wading through heaps of newspapers towards him, and then finding him with a sheet of paper held before his face. She was greatly puzzled to know what he was doing, even putting his spectacles on to try if they would help to solve the mystery. She did not find out for quite a long time that her father was the editor of a newspaper, and had to do a lot of reading.

Helen always speaks with fond affection of her father, whom she describes as loving and indulgent. He was a noted raconteur, and after she had learned the

HELEN KELLER'S NEW HOME

manual alphabet, he used to spell out some of his best anecdotes to her, and he was quite delighted when she repeated them to visitors. She loved her mother, too, very dearly, but for a time after the birth of her little sister Mildred, was inclined to look upon the new baby as somewhat of an intruder. Helen had a doll which she kept in a cradle. One day she found Mildred in the cradle asleep. In a fit of anger she rushed upon the cradle and overturned it. The baby would probably have been injured had not Mrs. Keller caught it as it fell. Helen was not consciously callous or vindictive, but those who live in a world of silence and darkness can know little of the tenderest affections, until these are cultivated and developed by endearing thoughts and words and intercourse.

"Meanwhile," as Miss Keller has since written, "the desire to express myself grew. The few signs I used became less and less adequate, and my failures to make myself understood were invariably followed by outbursts of passion. I felt as if invisible hands were holding me, and I made frantic efforts to free myself."

Her parents were much troubled about her. They lived a long way from any school for the blind or deaf, and some of their friends doubted if she could be taught at all. It seemed unlikely, too, that a teacher could be secured who would be willing to come to such an out-of-the-world place as Tuscumbia, to teach a little girl who was both deaf, dumb, and blind. Mrs. Keller had read Dickens' account in his "American Notes" of the training of Laura Bridgman, who was also deaf and blind, and she was cheered and encouraged thereby. But her heart fell when she remembered that Dr. Howe, who had discovered the best methods of teaching the deaf-blind, had been dead many years.

When Helen was about six years old, her father took her to an eminent oculist in Baltimore, but nothing could be done for her eyes, and he could give her anxious parents no hope. Mr. Keller then went on to Washington, to consult Dr. Alexander Graham Bell as to a school for his daughter. The journey was to Helen, then a restless, excitable little creature, one long series of novel and delightful impressions, and to this day she recalls with pleasure the kindliness of Dr. Bell, who took her on his knee while he allowed her to examine his watch.

Acting on Dr. Bell's advice, Mr. Keller wrote to Mr. Anagnos, Dr. Howe's son-in-law and successor as director of the Perkins Institution in Boston—the scene of Laura Bridgman's triumphs—asking if he knew of a teacher competent to begin his daughter's education. Within a few weeks Mr. Anagnos was able to reply in the affirmative. This was in the summer of 1886, but it was not until the following March that the teacher, Miss Sullivan, arrived at Helen's home to undertake her duties.

Anne Mansfield Sullivan was born at Springfield, Massachusetts, in 1866. Very early in life she became almost totally blind, and she entered the Perkins Institution in Boston when she was about fourteen years of age. Some time afterwards she partly regained her sight. She graduated from the Boston Institution in 1886. In the same year, as we know, Mr. Keller applied for a teacher for his daughter, and Mr. Anagnos recommended Miss Sullivan. This young lady was specially qualified for the position by her personal experience of blindness, by her special studies, and by the fact that during the six years of her school life she had come into close contact with Laura Bridgman.

When she was selected to undertake the education of Helen Keller-a task which was to bring her, together with her pupil, so prominently into public notice - she at once began specialised studies, including the assimilation of Dr. Howe's reports on Laura Bridgman, to fit herself for the position. Unquestionably Dr. Howe, by his brilliant investigations in the education of blind and deaf, made Miss Sullivan's work possible, but just as certainly it was Miss Sullivan who first succeeded in teaching language to blind deaf-mutes, and in placing their education on a level with that of the unafflicted. She began where Dr. Howe left off. Her method was not to teach each word separately by definition, but by constant repetition to associate the word with the idea or object it represented, to teach in sentences by imitation, as with an infant.

Before her teacher came to her Helen lived in a sort of perpetual dream. Her intellect was dormant, and she was impelled to action by innate impulse, or by imitation, anger, or desire, rather than by will. By what she calls "tactual memory," and comparison of later with earlier sensations, she has since realised that in those years of childhood her inner life was a blank without past or future. She never consciously thought or exercised choice, or loved or cared for anyone or anything. Helen had, however, an instinctive power of association and imitation. She felt and understood jars like the stamp of a foot or the closing of a door or window, and after smelling the rain and feeling the sensation of wetness she would take shelter instinctively.

It was on the 3rd March, 1887, that Miss Sullivan arrived at the Keller homestead at Tuscumbia, to

take charge of the education of little Helen. Her pupil was then nearly seven years of age. Helen, in her writings, compares herself before her education began to a ship in a fog without compass or sounding-line. On the day of her teacher's arrival Helen had vaguely understood, from her mother's signs, and the general commotion, that someone was expected, and she stood in the porch waiting. She felt the vibration of approaching footsteps and ran to meet them. Then she was caught up in the arms of one, to use Helen's own words, "who had come to reveal all things to me, and, more than all things else, to love me."

Miss Sullivan, on her part, admits having expected to find a pale, delicate child, such as Laura Bridgman was, according to Dr. Howe. But Helen Keller was a strong and active girl, of a good healthy colour, unrestrained in her movements, and of tireless activity. Her teacher described her as having at that time an intelligent face but one slightly lacking in mobility. From Helen's impatience of restraint she concluded that it would be difficult to teach her discipline and self-control. The child was inevitably a good deal spoiled, and her teacher found it extremely difficult to teach her obedience.

On the morning after her arrival Miss Sullivan gave her pupil a doll, which had been sent by the little blind children at the Perkins Institution and dressed by Laura Bridgman herself, a fact which Helen Keller did not know until later. Taking advantage of Dr. Howe's experience with his deaf-blind pupils, Miss Sullivan commenced at once to try to teach Helen the manual alphabet. She began by spelling into her pupil's hand the letters "d-o-l-l." Helen was interested, but this

finger-play meant nothing to her then. She merely imitated the signs for that and other words in an uncomprehending sort of way, and it was not for several weeks afterwards that she understood that everything has a name. Her teacher tried to make it clear that one word meant one thing and no other, but that still the word "doll" applied to other dolls as well. Helen would persist in confusing the words "mug" and "water," and her teacher was equally insistent in correcting her. In a fit of anger and impatience the naughty little girl smashed the new doll on the floor; nor did she show any sign of regret for what she had done. But Miss Sullivan was not daunted in her difficult task. To the child's delight she was taken out in the bright sunshine to the well-house. Someone was drawing water from the pump and the teacher placed Helen's hand under the spout. While the cool stream gushed over one hand, Miss Sullivan spelled into the other the word "water," at first slowly, then quickly. Suddenly it flashed across the girl's dawning intelligence that the sign letters "w-a-t-e-r" meant the cool liquid that came from the pump. Helen went into the house after her visit to the well a changed girl. She remembered her poor broken doll, felt her way to the hearth, and tried to put the pieces together again, but in vain. Then she realised what she had done, and for the first time felt repentance and sorrow. It was as if consciousness and conscience were awakened together. She began to understand her teacher's motives in insisting on obedience, and she rapidly became quite docile and eager to learn.

In this wise did the little afflicted girl begin to learn to associate ideas. She realised that every object has a name, and that the manual alphabet was the key to

everything she wished to have, to tell, and to know. When Helen grew up she wrote in one of her essays "I was not conscious of any change or process going on in my brain when my teacher began to instruct me. I merely felt keen delight in obtaining more easily what I wanted by means of the finger motions she taught me."

Then everything she touched suggested new questions, new thoughts. Life was suddenly invested

with fresh interest and meaning and mystery.

From the beginning, Miss Sullivan made it a practice to converse with her pupil (by means of the finger language) just as she would with a very young child endowed with all its faculties. She did not at first give Helen regular lessons, but treated her like a two-year-old child just learning to speak, until she had acquired a working vocabulary.

The normal child learns by imitation. It sees people do things and tries to do them. It hears others speak and tries to speak too. But intelligence develops long before speech. Then when the child is able to speak and acquires a little vocabulary, the desire for knowledge grows with what it feeds on. The normal healthy child's curiosity and fondness for asking questions is usually well developed, and little Helen

Keller was certainly no exception to the rule.

Helen's mental faculties had been cribbed, cabined, and confined like a sensitive plant in a darkened room. Her teacher gradually opened the shutters, admitted the blessed light of heaven, and lo! this lonely, human soul blossomed forth like a lovely flower.

One spring morning little Helen found a few early violets in the garden, and brought them to her teacher. Some train of thought impelled her to ask what was the

meaning of the word "love." Miss Sullivan tried to illustrate the meaning by kissing her. But Helen did not then allow anyone to kiss her except her mother. So her teacher put her arm round her little puzzled charge and spelled into her hand, "I love Helen."

"What is love?" again asked Helen.

"It is here," replied Miss Sullivan, putting her finger over the girl's heart. The latter felt her heart beating for the first time, but still her teacher's words puzzled her.

Helen inhaled the fragrance of the violets, and asked in a dreamy sort of way, "Is love the sweetness of flowers?"

"No," replied her teacher.

The little girl thought again. The sun was shining, and its heat gave her an idea. "Is that not love?" she asked with upturned face.

But Miss Sullivan had to give her a gentle negative, and Helen was quite disappointed at her teacher's inability to explain the meaning of love.

Helen was to gain insight for the first time into the realm of abstract ideas very soon afterwards. A day or two later she was stringing beads of different sizes in symmetrical groups. She made repeated mistakes, which Miss Sullivan patiently pointed out. At length the girl discovered for herself a very obvious error in the arrangement of the beads, and she concentrated all her faculties on the point, and tried to think how she should have arranged them. Her teacher touched her forehead and spelled out an emphatic "think!"

Instantly Helen realised that this word "think" meant the process that was going on in her brain. Thus did her developing intellect first become conscious of the perception of an abstract idea. As she wrote in

later years: "When I learned the meaning of I and me, and found that I was something, I began to think. Then consciousness first existed for me." Then she began to think of other things in the light of this newly awakened consciousness. Her teacher endeavoured to explain that love is a faculty of the spirit, the mysterious force that attracts one person to another, and Helen came dimly to realise that there were invisible bonds between her spirit and those of her loved ones. So in later years when she was asked to define love she replied in her bright way: "Why, bless you! that is easy; it is what everybody feels for everybody else."

The next important step in Helen Keller's education and mental development was learning to read. Soon after she was able to spell a number of words, her teacher-following the example but reversing the sequence of Dr. Howe's original method in the case of Laura Bridgman—gave Helen many slips of cardboard on which were printed words in raised letters. She quickly gathered that each printed word stood for an object, an act, or a quality. Arranging the words in a little frame helped her to form sentences. Then she would place words on the object they represented, and construct sentences in that way; thus, "doll is on bed"—an idea which she could, so to speak, visualise. In fact, nothing could be better calculated to make the young blind girl grasp in the most convincing fashion the meaning of words.

From the printed slip it was, to an intelligent child like Helen, quite an easy stage to the printed book. She took a "Reader for Beginners," printed in raised characters, and looked for words that she knew. It was, she tells us, like a game of hide-and-seek to her, and one in which she took the keenest pleasure. This was

part of her teacher's scheme of education—a system which concealed system. For a long time she gave Helen no regular lessons, and there was such perfect sympathy between teacher and pupil that Helen has placed on record that her lessons were to her more like play than work.

Little Helen Keller grew to be an ardent lover of nature. The scents and odours of the woods and wild-flowers, and the touch and feel of the roses and lilies in the garden, and the fruits in the orchard, appealed to her remaining senses with a peculiar and unique poignance. She would hold a little fluffy chicken, or even a frog, in her hand until, forgetting its fright, it would chirp or croak as the case might be, and she would feel the vibration of its throat. Once she had a pet rooster that would perch on her knee and crow, and she humorously said that "a bird in my hand is worth two in the barnyard." Even the smell of her pony's breath is a vivid memory to her now of those happy days when she used to play on the banks of the Tennessee river, and learned to know something of the world about her.

The great outer world, with its seas and continents and mountains and valleys, still seemed strange and unreal to her, but was brought home more clearly to her mind by the alto-relievo maps which her teacher modelled for her in clay. The conventional division of the earth into zones and so forth, she found puzzling and tiresome. Nor was her mind at all attracted by arithmetic or any branch of mathematics, although she made considerable headway in them at a later stage of her education.

Helen was fortunate in having a teacher who put into practice the Shakespearean maxim, "Study what you most affect." Miss Sullivan talked to her pupil

naturally without catechising her. The only questions she asked were in trying to find out what the girl wanted to know. She gave Helen practical object-lessons from life, arousing her interest in botany, by encouraging her to feel at a plant at different stages of its growth; and in biology and natural history, by allowing her to plunge her hands into a bowl of water full of tadpoles and feel them dart about.

"Thus I learned from life itself," writes Helen Keller.

"At the beginning I was only a little mass of possibilities. It was my teacher who unfolded and developed them. When she came everything about me breathed of love and joy and was full of meaning. She has never since let pass an opportunity to point out the beauty that is in everything, nor has she ceased trying in thought and action and example to make my life sweet and useful."

In the year 1888 Helen, then eight years of age, left the peaceful seclusion of her beautiful home for the great busy world outside and beyond. This journey naturally made a different and more vivid and lasting impression on her mind than the one she had taken to Baltimore a couple of years before. She was no longer excited and restless with vague and inchoate longings. She sat quietly beside Miss Sullivan in the train, taking in with eager interest all that the latter spelled into her hand, descriptive of the other passengers and of the hundred and one objects and views seen from the windows. They went to Boston. Helen visited the Perkins Institution for the Blind, and at once began to make friends with the other blind children. She was delighted to find that they knew the manual alphabet, and that they could communicate with her in her own silent language, in which, however,

they were not so proficient as herself. Pathetically enough she confesses to a feeling of surprise and pain when she realised that they too were blind, and that they read books with their fingers like she herself did. She realised her own deprivations, but had a vague sort of idea that those who were not deaf had a sort of "second sight." Still she found these young afflicted ones happy and contented, and, childlike, she forgot the sense of pain in the pleasure of their companionship.

After having her sense of the reality of history quickened by visits to Bunker's Hill and the landingplace of the Pilgrim Fathers, Helen and Miss Sullivan spent the rest of their vacation at Brewster, near Cape Cod, with some friends. Miss Keller still has the most vivid recollections of that holiday by the sea. The roar of the surf, and the tang of the keen bracing air were quite new to her, for she had been born and bred far inland. She was very eager to go bathing. The sensation she found at first delightful, but presently she struck her foot against a rock and fell, to be buffeted to and fro by the waves. She was frightened, but was soon picked up and reassured by the devoted Miss Sullivan. Helen's first words, as soon as she had recovered her breath, were: "Who put salt in the water?"

In the autumn pupil and teacher returned to their southern home. Helen's mind was full of pleasant memories. Life seemed a better, brighter, and more joyous thing than she had ever before imagined. Under the loving guidance of her more than friend, Miss Sullivan, the young girl's intelligence grew and developed and threw out tendrils which linked her to her friends with bonds of sympathy and love.

Helen was extremely sensitive to outside influences, and was in close sympathy with the feelings and emotions of the friends in whose company she happened to be. This was particularly marked in her relations with Miss Sullivan. She followed the movements or her teacher so closely and minutely that she responded to her moods, and when they were in the company of others, like Laura Bridgman she seemed to know what was going on, even if the conversation had not been conveyed to her for some time. Not only was she able to recognise her friends and acquaintances the instant she touched their hands or clothing, but she had the faculty of perceiving the state of mind of those around her. Miss Sullivan writes of her: "One day, while she was walking out with her mother and Mr. Anagnos, a boy threw a torpedo, which startled Mrs. Keller. Helen felt the change in her mother's movements instantly, and asked, 'What are we afraid of ? "

Perhaps the most striking illustration of this strange power which some people call telepathy, and others attribute to the possession of a mysterious "sixth sense," was the series of experiments conducted while her ears were being examined by aurists in Cincinnati. They were tried with a view of ascertaining positively whether or not she had any perception of sound. To everyone's amazement she appeared to hear not only a whistle but also an ordinary tone of voice. Miss Sullivan was standing beside her, holding her hand. It suddenly struck the teacher that her pupil was receiving impressions from or through her, and she quietly put Helen's hands upon the table and withdrew to the other side of the room. The aurists repeated their experiments with surprisingly different results.

Helen remained statuesque and motionless through them all, and gave no sign of having received any impression. At Miss Sullivan's suggestion, one of the gentlemen present took her hand, and the experiments were repeated. Then, again, her face changed whenever she was spoken to, but there was not such a lighting up of the countenance, or such an expression of radiant intelligence, as when her teacher held her hand.

The spring of 1890 was a red-letter period in Helen Keller's life. She who had hardly ever made an intelligible or articulate sound, who had never since earliest infancy heard the voices of those nearest and dearest to her, learned to speak! She always had a strong desire to speak, and persisted in trying to make vocal sounds, although her teacher discouraged this instinctive tendency, as she feared it might become unpleasant. Helen used to make noises—the natural outcome of the desire to exercise her vocal organskeeping one hand on her throat, while with the other she felt the movements of her lips. Her teacher at first made no effort to teach her to speak because, as she herself admitted, she regarded her pupil's inability to watch the lips of others as an insuperable obstacle to the acquisition of speech.

Helen laughed and cried quite naturally, but she had forgotten what articulate speech was. From an early age she was conscious that her means of communication was different from that used by the people around her. Her desire for information found expression in the questions she asked her teacher. She wanted to know, for instance, "How do the blind girls know what to say with their mouths? Why do you not teach me to talk like them? Do deaf children ever learn to speak?" and so on. Miss Sullivan

explained that some deaf children were taught to speak' but that they could watch the movements of their teacher's lips, which was a great assistance to them. Helen replied with a pathetic persistence that she was sure she could feel her teacher's mouth very well.

Not long afterwards, Mrs. Lamson, who had been one of Laura Bridgman's teachers, called and told Helen about the little Norwegian child, Ragnhild Kaata, who also was deaf and blind, and yet had been taught to speak and understand speech by touching her teacher's lips with her fingers. Helen at once resolved to learn to speak, and never once wavered in her resolution. She was taken for advice to Miss Sarah Fuller, Principal of the Horace Mann School for the deaf and dumb. This lady volunteered to teach Helen herself, and gave her her first lesson in March, 1890.

Helen Keller describes Miss Fuller's methods thus:—
"She passed my hand lightly over her face, and let me
feel the position of her tongue and lips when she made
a sound. I was eager to imitate every motion, and in
an hour had learned six elements of speech, N, P, A, S,
T, I. Miss Fuller gave me eleven lessons in all.
I shall never forget the surprise and delight when
I uttered my first connected sentence: 'It is warm'
True, they were broken and stammering syllables, but
they were human speech."

Of course she had only just begun to learn the rudiments of speech. At first most people could not have understood one word out of a hundred that she used. Only Miss Fuller and Miss Sullivan could follow her then, but by her own untiring perseverance, aided and guided by her devoted teacher, Helen finally learned to speak naturally and intelligibly. It amazed

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her to find how much easier it was to talk than to spell on her fingers, and after a time she, on her part, practically ceased to use the manual alphabet, but Miss Sullivan and a few friends still continued to use it in communicating with her, as being more rapid and convenient.

Miss Keller's voice has been described as low and pleasant. Her speech is said to lack variety and modulation; it runs in a monotone when she is reading aloud, and when she speaks moderately loud, it hovers round the two or three middle tones. Her voice gives the impression that there is too much breath for the amount of tone. Some of her notes are musical and charming. Latterly the principal thing that is lacking is sentence, accent, and variety in the inflection of phrases. Miss Keller pronounces each word as a foreigner does when he is still labouring with the elements of a sentence, or as a child does when reading aloud and has to pick out each word. Nevertheless, when it is kept in mind that she never remembers having heard a single word of human speech, the progress she has made in articulate language is nothing short of marvellous.

Miss Sullivan was often asked how she taught Helen the names of abstract ideas, like goodness and happiness. With characteristic modesty she has written: "It seems strange that people should marvel at what is really so simple. Why, it is as easy to teach the name of an idea, if it is clearly formulated in the child's mind, as to teach the name of an object." She goes on to explain that if a child is given say something sweet to eat, and he hears or has the word "sweet" spelled into his hand, he will always associate the arbitrary sign with the definite sensation. But it



A LESSON IN LIP-READING

was in the unique combination of sympathy with perspicacity that Miss Sullivan excelled as a teacher. Being, as she was, in complete sympathy with her pupil, she was able to seize the psychological moment to convey an impression, and to give her its equivalent meaning in articulate language.

Deeper problems soon began to trouble Helen's young mind. When she was about ten years old she wrote, among others, the following questions on her tablet:—"I wish to write about things I do not understand. Who made the earth and the seas and everything? What makes the sun hot? Where was I before I came to mother? I know that plants grow from seeds which are in the ground, but I am sure people do not grow that way. I never saw a child plant. . . Why does not the earth fall, it is so large and heavy?"

After a good deal of thought Miss Sullivan came to the conclusion that the child who was capable of framing and asking these questions was also capable of comprehending at least the elementary answers to them. Once Helen had succeeded in formulating the ideas which underlay her questions, they seemed to absorb all her thoughts. Coming across a large globe she suddenly asked her teacher, "Who made the real world?" Miss Sullivan endeavoured to explain how the origin of the visible universe is accounted for, how "men came to believe that all forces were manifestations of one power, and to that power they gave the name God."

Helen evidently thought the matter over earnestly, and then, like her predecessor, Laura Bridgman, she began to ask the age-old enigmas: "Who made God?" "What did God make the new worlds out of?"

and so on. Her teacher had to admit that there are many things the wisest people in the world cannot explain, and for which faith supplies the only solution. At that time Helen was taught no creed or dogma, nor was any effort made to press religious beliefs upon her attention.

At a later period Miss Sullivan gave an interesting account of Helen's progress in the acquisition of language. She helped her pupil to acquire knowledge and the means of expression simultaneously and naturally. Grammar was discarded. Helen acquired language by practice and habit and memory, rather than by any study of rules and definitions.

In the autumn of 1890, when Helen Keller was just over ten years of age, she wrote her first little story. She took great pleasure in its composition, and named it "The Frost King." She copied the story out and sent it to Mr. Anagnos, who was very pleased with it, and had it printed in one of the reports of the Perkins Institution. Soon after Helen went to Boston, however, it was discovered that her story, "The Frost King," bore such a close resemblance to another story, "The Frost Fairies," by Miss Margaret T. Canby, published some years previously, as to throw doubt on Helen's originality. After considerable controversy and some inquiry, during which time Helen suffered acute agony of mind, it was established that if there had been plagiarism it was unintentional, and due more to an unusually retentive subconscious memory, than to any disingenuousness on her part.

For some time after her first unfortunate experience of authorship, Helen was extremely diffident and distrustful of herself in committing anything to paper. It was partly to overcome this timidity, and to restore

her self-confidence, that Miss Sullivan encouraged her to write her first brief account of her life for a periodical. The young author was then twelve years old. She may be said to have then reached a stage of her mental development which marked the full awakening of her consciousness and intelligence. Hitherto, she had lived the unself-conscious life of a happy, normal, young child.

In the following year (1893) Helen took a trip to Washington during the inauguration ceremonies of President Cleveland, and in the same year she paid her first visit to Niagara. She wrote afterwards: "It is difficult to describe my emotions when I stood on the point which overhangs the American Falls, and felt the air vibrate and the earth tremble." Miss Keller comments on the fact that people should be surprised because she was impressed by the grandeur of Niagara. But even to her fettered faculties things retain something like their true proportions, and Niagara will always be titanic. Besides, her sense of touch is so sensitive and highly developed-for has she not written: "Necessity . . . gives a precious power of feeling to the whole body. Sometimes it seems as if the very substance of my flesh were so many eyes looking out at will upon a world new created every day?"-that the vibrations of the thunderous roar of Niagara would mean more to her than to the average person with more senses and fewer wits.

The year 1893 was a busy one for Helen. Accompanied by Miss Sullivan and Dr. Alexander Graham Bell, she visited the Chicago World's Fair. She received permission from Mr. Higinbotham, the President of the World's Fair, to feel any exhibit in which she was interested, and she gladly took advantage of the

Jeachth is well and sends hen kind hemmbhances to mas time is almost hepe! I can handly wait. top the tun to begin! Ihope your lhpistmas Day will beavery happy one and that the New Year will be tull of brightness end joy top you and ertryont. From your little friend Helen A. Keller

FAC-SIMILE OF A LETTER WRITTEN BY HELEN KELLER TO DR. OLIVER WENDELL HOLMES

privilege. Her eager fingers felt at all sorts of things; amongst many others the life-like French bronzes claimed her enthusiastic admiration. Dr. Bell showed her and explained the working of the telegraph, the telephone, the phonograph, and many other marvels of modern science. In fact, the three weeks she spent at the Fair seemed to the young afflicted girl like hours in fairyland; but a fairyland made real, a sort of dreamland come true. In reality she was revelling in her first actual living contact with some of the most interesting aspects of the busy, work-a-day world.

It is difficult for anyone who has never known what it was to suffer the loss of a sense, to realise the value, importance, and high stage of development of the sense of touch in the blind, and particularly in the deaf-blind. In the case of Helen Keller, her hand takes the place of sight and hearing. To her the world, devoid of light and colour and sound, is based on touch-sensations. But, she writes: "The world I see with my fingers is alive and ruddy and satisfying." "There is nothing," she goes on, "misty or uncertain about what we can touch." Certainly the range of possibilities she opens out to the sense of touch is a wonderfully wide and varied one. She can recognise her friends, first by the vibration of their footsteps, or, if they are still, by touching their hands or faces. She is able to trace and appreciate the beautiful contours of a statue, or the delicate symmetry of a flower.

Up to the year 1893 Helen Keller had, as we have seen, studied and read a good deal, but in a somewhat desultory fashion. She had already gained some acquaintance with the histories of Greece and Rome, and that of her own country. Her knowledge of French was sufficient to enable her to read La

Fontaine's Fables, Le Médecin Malgré Lui, and passages from Athalie in the original. She also paid constant attention to the improvement of her speech.

When she had recovered from the strain and excitement of her visit to Chicago, it was felt that the time had arrived for her to take up more serious studies in a systematic manner. In October, 1893, Helen and Miss Sullivan were staying with friends at Hulton, Pennsylvania. There and then she commenced the study of Latin grammar under the tuition of a Mr. Irons. She was just beginning to be able to read Cæsar's "Gallic War," when she had to return to her home in Alabama. It was, too, about this time that, in reading such works as Tennyson's "In Memoriam," she began to appreciate the beauty and importance of literary style, and the necessity of the training of the judgment and the critical faculty.

The summer of 1894 saw Miss Sullivan and her charge at the Chautauqua meeting of the American Association for the Teaching of Speech to the Deaf. It was then arranged that Helen should go to the Wright-Humason School for the Deaf in New York City, for the purpose of having the best training in vocal culture and lip-reading. In addition to this special tuition she studied, during the two years she attended the school, arithmetic, geography, French, and German. Her progress in speech and lip-reading was not such as she and her teachers had hoped or expected. Arithmetic, too, gave her a good deal of trouble. It was a subject which did not attract her, consequently she took little interest in it, and did not at that time make much headway. But these disappointments apart, the two busy years she spent in New York,

diversified as they were by daily walks in Central Park, and occasional trips up the Hudson river to such places as "Sleepy Hollow" (immortalised by Washington Irving), were happy years indeed. In a diary she kept while a student at the Wright-Humason School, she wrote: "I find that I have four things to learn in my school life here, and indeed in life—to think clearly without hurry or confusion, to love everybody sincerely, to act in everything with the highest motives, and to trust in dear God unhesitatingly."

From being quite a little girl Helen had cherished the idea of going to college, and characteristically enough had preferred Harvard, because at places like Wellesley there were only girls. As she grew older the idea took firmer root and became an earnest desire. Accordingly, in October, 1896, Miss Keller now a young miss of sixteen, entered a school for young ladies at Cambridge, Mass., to be prepared for the matriculation examination for Radcliffe College. She did not hesitate to enter into competition with other girls, endowed with all their faculties, determined as she was to secure a degree.

The devoted Miss Sullivan attended the classes at the Cambridge school with her former pupil and acted as

Cambridge school with her former pupil, and acted as interpreter of the lessons and instructions given. Miss Keller's studies for the first year included English history and literature, German, Latin, and arithmetic. She already possessed a good knowledge of English, German, Latin, and French. Even with these initial advantages the young girl was heavily handicapped. It was not to be expected that Miss Sullivan could spell into her hands all the information that her studies required, and it was impossible to have text-books specially embossed in time to be of use. For a

while she had to copy out her Latin exercises in Braille, so that she could recite them with the other girls. Her teachers soon came to understand her imperfect speech sufficiently to answer her questions and correct her mistakes. She could not, of course, make notes in class, or write exercises; but she typed all her compositions and translations herself at home.

Miss Sullivan's duties at this time were very tedious and very laborious, but she carried them out with infinite patience. In addition to spelling into Helen's hand all the lessons that her various teachers gave her, she read and re-read books which could not be had in raised print. Some of her tutors learned the manual alphabet in order to communicate with Helen direct. But, as our heroine has placed on record "there was only one hand that could turn drudgery into pleasure." During thic year Miss Keller notes that she finished arithmetic, and read part of Cæsar's "Gallic War," also a good deal in German, including Schiller, Lessing, and Goethe. In English she read Shakespeare, Burke, and Macaulay.

Miss Keller resided in one of the school-houses where Mr. Howells had formerly lived. There she had the companionship of several girls of her own age. She took part in many of their games and frolics, and some of her friends and playmates learned the manual alphabet so as to be able to chat with her. After Christmas her little sister Mildred came to study at Cambridge. Six months later, from the 29th June to 3rd July, 1897, she sat for the preliminary examination for Radcliffe College. She presented herself for examination in German, Latin, French, and English, and Greek and Roman history. Having to use a typewriter she occupied a separate room, so that the noise

would not disturb the other candidates. She was successful in securing a pass in every subject, and was awarded Honours in German and English.

During her second year at the preparatory school at Cambridge, Miss Keller had still many difficulties to contend with. Few of the books she required were embossed, and she lacked much of the requisite apparatus. She persevered with her mathematical studies, although she still found them little to her taste. In geometry she was of course unable to follow the figures drawn on the blackboard, and her only means of gaining a clear idea of them was to form them on a cushion by means of bent wires with pointed ends. She was, however, steadily overcoming the many difficulties with which she was faced, when Mr. Gilman, the principal of the school she attended, decided that she was being overworked, and that her studies must be rearranged. This would have meant spending a much longer time in preparing for college, and Helen wished to go up with her classmates. The upshot was that Mrs. Keller removed her two daughters from Mr. Gilman's school.

From February, 1898, Helen continued her studies under the direction of Mr. Merton S. Keith at Wrentham, Mass.—the indispensable Miss Sullivan always acting as the sympathetic and unwearying interpreter. In the following October they returned once more to Boston, but Helen's preparations to enter college were uninterrupted. She found individual tuition both more efficient and more adapted to her tastes and requirements than studying in class. Her native perseverance and intelligence, with sympathetic guidance, enabled her to conquer all difficulties. She sat for her final examination for Radcliffe College on the 29th and 30th June, 1899, and despite her heavy handicap, came

through with flying colours. She had overcome all obstacles and proved herself the peer of her sisters who could see and hear.

Miss Keller did not immediately take advantage of her success by proceeding to college, but spent another year under the tuition of Mr. Keith. So that her dream of entering college did not assume actuality until the autumn of the year 1900.

When at last she entered Radcliffe College the first days were full of absorbing interest. She began her studies with eagerness. To her the university seemed the entrance hall to the wisdom of all the ages. When, however, she came to compare reality with the high ideals she had formed, it is not surprising that she experienced some measure of disillusionment. She felt particularly the lack of leisure and peaceful solitude for meditation. "One goes to College to learn, it seems, not to think," she wrote, with a foretouch of her later playful irony.

In the lecture-room she was to all intents and purposes alone; even the professor was to her very remote. The lectures were spelled into her hands as rapidly as possible. She was, as has been said, unable to take notes there and then, but she did not think this to be much of a disadvantage. Usually she typed what she remembered of the lectures when she reached home. She still had to have many of the books that she required, and which were not procurable in blind type, read into her hand, a slow process which sometimes made her a little impatient, especially when she knew that other girls were at play. Literature was her favourite study, less a task than a pleasure and a delight; and, as with most students, examinations were her pet aversion.

Miss Keller owns to an enduring love of books in general, and reading in particular. Beginning with the "Little Lord Fauntleroy" of her childhood, she takes her friends with her in her explorations and adventures among the classics, commenting with reverence on the Bible, and with enthusiasm on Shakespeare, although she notes that the latter's tragedies impressed her more deeply, if not more pleasantly, than his comedies. She calls literature "my Utopia."

Though fond of books and the company of the immortals, reading is not Helen's only pleasure. When quite a little girl she learned to row and swim. One of her favourite pastimes is yachting, which she first indulged in on her visit to her beloved "Evangeline" country, Nova Scotia, in 1901. She dearly loves a walk in the country which brings her into close touch with Nature. Next to a walk, she says she enjoys a spin on her tandem bicycle. Whenever she can, she takes one or other of her dog friends with her on her excursions afoot or awheel. Her indoor amusements and pastimes are just like those of other girls. She is fond of knitting and crocheting, and enjoys a game of checkers (draughts) or chess with a friend on her specially made board with sunk squares and marked men. But if, as Helen has written, "there are children around, nothing pleases me so much as to frolic with them."

So that we see that Helen Keller finds life by no means a dull or tedious affair. She is, as we know, keenly alive to outside impressions. Her description of the busy life of the city streets is vivid and accurate. She writes: "The rumble and roar of the city smite the nerves of my face, and I feel the ceaseless tramp

of an unseen multitude," and she goes on to describe "the grinding of heavy waggons on hard pavements and the monotonous clangor of machinery," and to contrast all this with the peace and charm and beauty of God's own countryside.

The fruits of her own observation provide her with plenty of material for conversation, but in addition her quick wit and ready sympathy enable her really to enter into the spirit of a conversation. If, in the course of a discussion, the friend next her should cease for a time to spell into her hand, the question invariably comes, "What are you talking about?" Thus she enters into the conversation, and at the same time keeps herself in touch with the affairs and ideas of everyday life.

It is a tribute to the unique charm and sweetness of Helen Keller's nature that wherever she has gone she has made hosts of friends. She has met many celebrities, and one and all have been, not merely interested or sympathetic, but captivated by her delightfully open, frank, ingenuous, and natural manner. With Miss Sullivan she visited Oliver Wendell Holmes—to whom she had written yearly from her childhood—and feeling a volume which she was told was a copy of Tennyson's poems, she began to recite:—

"Break, break, break, On thy cold gray stones, O sea!"

But she stopped suddenly, she had made the old man shed tears. Whittier, too, was much moved when Helen recited some of his poems. Many other literary people were introduced to her, and became her friends, notable among them being Mark Twain, William Dean Howells, and Mrs. Riggs.

Like most of us, Helen has her dark hours. "Sometimes," she writes in a hauntingly beautiful passage, "a sense of isolation enfolds me like a cold mist as I sit alone and wait at life's shut gate. Beyond there is light and music and sweet companionship, but I may not enter. Fate, silent, pitiless, bars the way. Fain would I question his imperious decree, for my heart is still undisciplined and passionate, but my tongue will not utter the bitter, futile words that rise to my lips, and they fall back into my heart like unshed tears. Silence sits immense upon my soul. Then comes hope with a smile and whispers, 'There is joy in self-forgetfulness.'"

Helen found the best of all consolations for these fits of despondency, which, to her bright and joyful nature, however, were not of frequent occurrence. Among her friends she was proud to number Bishop Brooks, and he taught her that "there is one universal religion—the religion of love." He taught her no special creed or dogma, but he impressed upon her mind the two great truths—the Fatherhood of God, and the brotherhood of man.

"I am too happy in this world to think much about the future," writes Helen Keller, "except to remember that I have cherished friends awaiting me there in God's beautiful Somewhere."

Her radiant intelligence was ever absorbing and assimilating knowledge of the wonders of the universe. Not only from books does this talented young woman gain her knowledge of men and things, but through her quick and nimble fingers and her quicker brain. In one of her later essays * she has written of her childhood: "I thought and desired in my fingers. If I had

· "Before the Soul Dawn" ("The World I Live In").

made a man I should certainly have put the brain and soul in the finger-tips." She traces the development of consciousness, the ability to think, and the gradual transition from objective impressions to subjective thought. When she was a child she used to think in spelling; even in these latter years she sometimes spells to herself with her fingers.

Having passed through her College career with distinction, Helen Keller came out into that larger school of experience which the world has to offer. She had attained the full stature of womanhood, and with it had

come a sweet and added dignity.

Her friends tell us that she is tall, and strong, and healthy. She has what at first seems a nervous habit of gesture, but this may be said to be the habit of expression with the hands—a necessity to all deaf people. Her face is animated and expressive. She cannot see other people's expressions, but when she is talking to an intimate friend, she puts her hand to her friend's face to "see," as she says, "the twist of the mouth."

One of Miss Keller's most characteristic traits is her sense of humour. There is nothing she enjoys so keenly as a contest of wits or a play on words. Mr. Joseph Jefferson was once explaining to Miss Keller the points of phrenology. He was touching her head.

"That," he said, "is your prize-fighting bump."

"I never fight," she replied, "except against difficulties."

This half-joking, wholly earnest remark discloses one of the secrets of her success.

Not unnaturally Miss Keller has no great relish for being interrogated or experimented upon. A

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psychologist once asked her if she spelled on her fingers in her sleep. Miss Sullivan answered for her that she did not think it worth while to sit up and watch; such matters as these were of so little consequence.

The humour of Helen Keller is of that fine temper which bespeaks the courageous optimist. We have had her courage and perseverance exemplified in her determination, first to learn to speak, and second, to go to College. She was successful in achieving both ambitions despite almost overwhelming obstacles. It has been very truly said that her life has been a series of attempts to do whatever other people do, and to do it just as well. She does not like to be beaten, and has a boy's admiration for physical bravery. The same spirit of high hopefulness is to be found in her later writings, of which more anon. In referring to her temporary loss of the sense of smell she writes: "I know that if there were no odours for me I should still possess a considerable part of the world. Novelties and surprises would abound, adventures would thicken in the dark." Nothing could more amply prove her dauntlessness and intrepidity.

Again, listen to the inspiring expression of her buoyant optimism, which can find compensating

advantages even in her deprivations.

"The calamity of the blind is immense, irreparable. But it does not take away our share of the things that count—service, friendship, humour, imagination, wisdom. It is the secret inner will that controls one's fate. We are capable of willing to be good, of loving and being loved, of thinking to the end that we may be wiser. We possess these spirit-born forces equally with all God's children."

In another place she has written:-

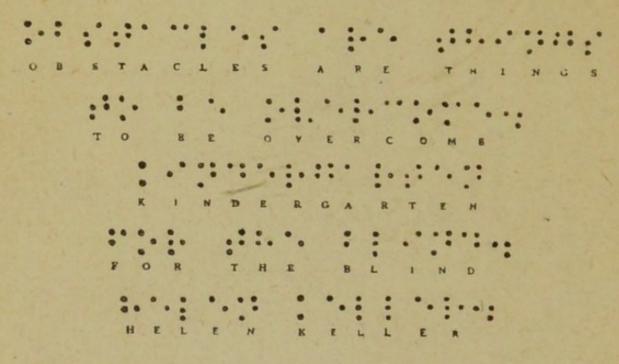
"The silence and darkness which are said to shut me in, open my door most hospitably to countless sensations that distract, inform, admonish, and amuse. With my three trusty guides-touch, smell, and taste-I make many excursions into the borderland of experience which is in sight of the City of Light. Nature accommodates itself to every man's necessity. If the eye is maimed, so that it does not see the beauteous face of day, the touch becomes more poignant and discriminating. Nature proceeds through practice to strengthen and augment the remaining senses. For this reason the blind often hear with greater ease and distinctness than other people. The sense of smell becomes almost a new faculty to penetrate the tangle and vagueness of things. Thus, according to an immutable law, the senses assist and reinforce one another."

Surely this is the strongest possible proof of the existence of a law of compensation. In vain does anyone, not similarly afflicted, preach hope or resignation to the deaf or blind. But when one who is subject to the double deprivation finds so much to make amends for her loss, that is surely an object-lesson in practical optimism to all the world.

This spirit of hope and resolution has animated all her writings from the very beginning. It is to be found in her beautifully written "Story of My Life." When it is remembered under what difficulties this rutobiography was compiled, it is a marvellous piece of writing, although it is rather a series of brilliant impressions than a single unified narrative.

This arises partly from the conditions of her work. Only occasionally does she have copies made of her

typing in Braille. Usually when she has typed out her matter, she cannot and does not revise it. In any case "The Story of My Life" laid the foundations of her literary reputation. She woke up to find herself famous. Her simple, beautiful life-story made a world-wide appeal. But she was not spoiled by success. She still remained her frank and unaffected self, taking a vivid interest in life, full of its joys, yet lending a sympathetic attention to the troubles of others.



SPECIMEN OF THE BRAILLE SYSTEM OF PRINTING FOR THE BLIND

(The black points indicate raised dots in the paper)

She has grown to realise her own deprivations, and faces life, not with merely passive resignation, but, as has been said, with a characteristically fine spirit of buoyant courage and fearlessness. She is inclined to resent, with something like indignation, any attempt to emphasise or exaggerate her limitations or those of others similarly afflicted.

"Critics," she writes, "delight to tell us what we cannot do. They assume that blindness and deafness

sever us completely from the things which the seeing and the hearing enjoy, and hence they assert we have no moral right to talk about beauty, the skies, mountains, the song of birds, and colours. They declare," she goes on with a fine scorn, "that the very sensations we have from the sense of touch are 'vicarious,' as though our friends felt the sun for us." Considering how little has really been discovered about the mind she expresses amazement that anyone should presume to define what one can know or not know. She frankly admits that there are many things in the visible universe unknown to her, but she concludes with a touch of pride: "Likewise, O confident critic, there are a myriad sensations perceived by me, of which you do not dream."

Loss even of sight and hearing she holds is not everything. And certainly Miss Keller herself is a living proof of her contention. She practises what she preaches—the Gospel of hope and endeavour. "The blind man of spirit faces the unknown and grapples with it, and what else does the world of seeing men do?" She advances, too, the claim of the blind to our common language and vocabulary. She herself she says, naturally and instinctively thinks and reasons as if she had five senses instead of only three. She cannot bring herself to say, "I feel" instead of "I see," or "I hear," for, after all, the word "feel," when applied to mental impressions, is as arbitrary and conventional as the word "see." Again she goes on to argue, with a good deal of ingenuity, that just as the brain of a man who has lost a limb still feels it to be there, so may the brain of a blind or deaf person still be capable of the same activity, even if the organ of sense be lost. The five senses can, too, work together, even if they are not

all possessed by one individual. The person who is deaf or blind, or, like Helen Keller, both deaf and blind, can find relief and assistance in the faculties and senses of another. Consequently, she reasons, "if the five senses will not remain disassociated, the life of the deafblind cannot be severed from the life of the seeing, hearing race;" and she concludes on a note of exultation, "his mind is not crippled, not limited to the infirmity of his senses."

Having thus vindicated the rights and privileges, and disproved the alleged disabilities of the blind, she carries the war into the camp of the critics by extolling the superiorities of the sense of touch and the consequent advantages of the blind and deaf. Touch to them and to her means substance, certainty, and reality. "At least," she has written with that now familiar light touch of irony, "every object appears to my fingers standing solidly right side up, and is not an inverted image on the retina which, I understand, your brain is at infinite though unconscious labour to set back on its feet. A tangible object passes complete into my brain with all the warmth of life upon it, and occupies the same place that it does in space, for without egotism the mind is as large as the universe."

Touch, too, conveys to her in a wonderful way a perception of the beauty of man's work and of the work of the Creator of the universe. She sometimes wonders if the hand is not more sensitive to the beauties of sculpture, for example, than the eye, and thinks the wonderful rhythmical flow of lines and curves can be more subtly felt than seen.

Miss Keller's supreme sensitiveness to outward impressions has brought her into close touch with Nature, her love for which has grown with her own

growth—a love which gives and is given by perfect sympathy and understanding. The voices of Nature have found their way to her eager, listening soul, the swish of grass, the rustle of leaves, the buzz of insects, the fluttering of birds' wings, the musical rippling of streams, all are "an undying part of happy memories." In her striking essay on "The Finer Vibrations," * she writes:—

"Between my experiences and the experiences of others, there is no gulf of mute space which I may not bridge. For I have endlessly varied, instructive contacts with all the world, with life, with the atmosphere whose radiant activity enfolds us all. The thrilling energy of the all-encasing air is warm and rapturous. Heat-waves and sound-waves play upon my face in infinite variety and combination, until I am able to surmise what must be the myriad sounds that my senseless ears have not heard."

Again, in writing of "Smell, the Fallen Angel," she says: "I doubt if there is any sensation arising from sight more delightful than the odours which filter through sun-warmed, wind-tossed branches. . . .

"Out of doors I am aware by smell and touch of the ground we tread and the places we pass. Sometimes, when there is no wind, the odours are so grouped that I know the character of the country, and can place a hayfield, a country store, a garden, a barn, a grove of pines, a farmhouse with the windows open."

It is in the delightful volume of essays, sketches, and impressions,* from which we have just quoted, that we see Helen Keller at her best. She has perfect command of an ample vocabulary, a flexible and lucid style, but above all, she has originality and imagination.

[&]quot; The World I Live In."

Early in the book we realise that her very deprivations enable her to have a unique point of view, and she makes the most of it. She opines: "It is pleasant to have something to talk about that no one else has monopolised; it is like making a new path in the trackless woods, blazing the trail where no foot has pressed before. I am glad to take you by the hand and lead you along an untrodden way into a world where the hand is supreme. But at the very outset we encounter a difficulty. You are so accustomed to light, I fear you will stumble when I try to guide you through the land of darkness and silence. The blind are not supposed to be the best of guides. Still, though I cannot warrant not to lose you, I promise that you shall not be led into fire or water, or fall into a deep pit. If you will follow me patiently, you will find that 'there's a sound so fine, nothing lives 'twixt it and silence,' and that there is more meant in things than meets the eye."

Sometimes her originality sparkles and glows in a very pretty wit. In the Preface to "The World I Live In," she refers somewhat deprecatingly to the insistent demands of her editorial friends who will not advise or encourage her to write about any subject save herself.

"First, they ask me to tell the life of the child who is mother to the woman. Then they make me my own daughter, and ask for an account of grown-up sensations. Finally, I am requested to write about my dreams, and thus I become an anachronical grandmother; for it is the special privilege of old age to relate dreams."

At another time her sprightly wit will become just a little mordant, her writing will have a sub-acid flavour, as when, after a little metaphysical discussion

she writes: "Self-knowledge is the condition and the limit of our consciousness. That is why, perhaps, many people know so little of what is beyond their short range of experience. They look within themselves and find—nothing! Therefore, they conclude that there is nothing outside themselves either."

It is in the power of imagination that we find the most marked difference and contrast between Helen Keller and her predecessor, Laura Bridgman. Dr. Howe's famous pupil was almost entirely lacking in the imaginative faculty, while in Helen Keller the quality of imagination, as will readily be admitted, is very highly developed. Imagination she calls the silent worker which decrees reality out of chaos. It is the foundation of the world's knowledge, the advance agent of the supreme creative moments of artist and inventor alike. She applies her deductions to herself.

"Without imagination, what a poor thing my world would be! My garden would be a silent patch of earth strewn with sticks of a variety of shapes and smells. But when the eye of my mind is opened to its beauty, the bare ground brightens beneath my feet, and the hedgerow bursts into leaf, and the rose-tree shakes its fragrance everywhere. I know how budding trees look, and I enter into the amorous joy of the mating birds, and this is the miracle of imagination.

"So imagination crowns the experience of my hands. And they learned their cunning from the wise hand of another, which, itself guided by imagination, led me safely in paths that I knew not, made darkness light before me, and made crooked ways straight."

Her imagination invests a world which would otherwise seem dark, and cold, and grey, with light and warmth and colour qualities, which pervade the

symbolism of her beautiful prose. She has read so much and talked so much about colours, that involuntarily she attaches meanings to them. Probably, by a process of analogy, or through the association of ideas whiteness conveys to her all that is exalted and pure, green means exuberance, red suggests love, or shame, or strength. "Without the colour or its equivalent," she says, "life to me would be dark, barren, a vast blackness."

When her College days were drawing to a close, Miss Keller had looked forward with eager anticipation to what the future held in store for her. In her essays on "The Practice of Optimism," she embraced with enthusiasm the Carlylean gospel of work. She values work for its own sake. "My share in the work of the world may be limited," she writes, "but the fact that it is work makes it precious. . . . The gladdest labourer in the vineyard may be a cripple."

Despite her deprivations she is happy. Her happiness has its foundations laid deep on the bed-rock of faith; it is so reasoned, and logical, and buttressed by her widening experience, that it has become a philosophy of life. In short, she is a convinced and intelligent optimist—not one who simply ignores the unpleasant and inconvenient, but one who finds the world good, and with characteristic energy does her share to make it better.

So we leave this remarkable woman who, having not eyes, yet sees things revealed only to those who have the inner vision; having not ears, yet hears the harmony of the spheres; and having no clarion voice, nor tongue of silver, yet with golden pen sends her words of faith and courage winging round the world, to be to others who faint or falter an example or a reproach. Who

but a seeress, to whom had been given more than had been taken away, could write of hope and consolation to her afflicted fellows in such words as these?—

"All sight is of the soul.

Behold it in the upward flight

Of the unfettered spirit! Hast thou seen

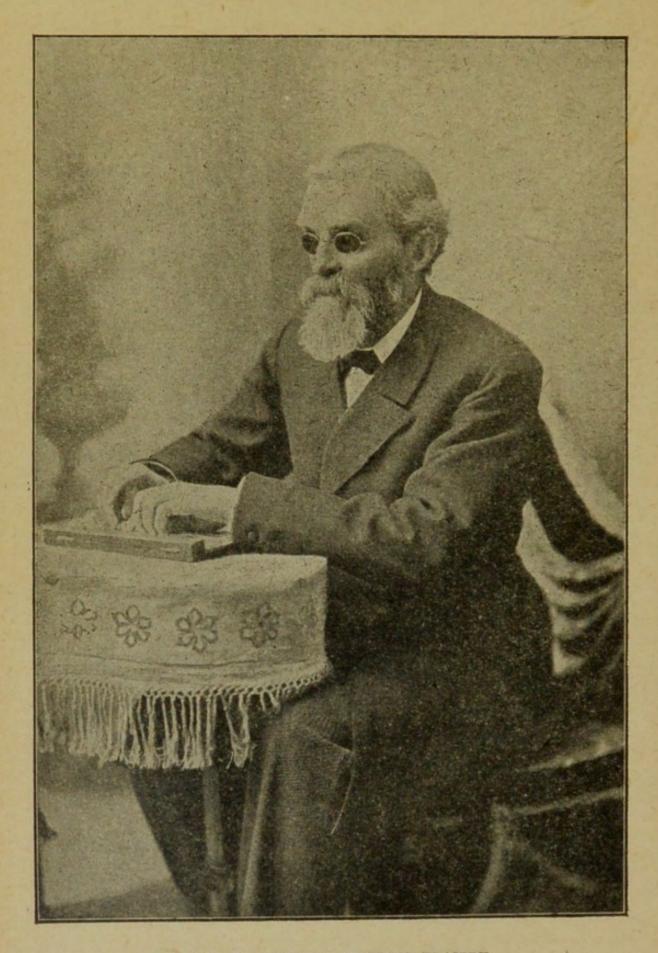
Thought bloom in the blind child's face?

Hast thou seen his mind grow

Like the running dawn, to grasp

The vision of the Master?"*

^{* &}quot;A Chant of Darkness," by Helen Keller.



SIR F. J. CAMPBELL WRITING BRAILLE

SIR FRANCIS JOSEPH CAMPBELL LL.D.

THERE are some men with so distinctive an individuality, a character so marked and consistent, whose every act and decision is, consciously or unconsciously, actuated by a dominating purpose, that they stand apart from their fellows. Such men are never by any chance waverers. They do not allow anyone or anything to make up their minds for them. From the dawn of self-consciousness every important act is determined by some characteristic motive. The life of such a man is a consistent whole, and this holds true whatever his avocation. Most of us teach either by example or by precept. That is an uncommon man who does both. Still rarer is he who, afflicted himself, sets out to teach others similarly afflicted.

Yet one man has done more than this. Francis Joseph Campbell, blind from his youth, has devoted the whole of his long life to the physical and mental education and the social betterment of his fellow-blind. He had no special genius, but an indomitable will; nor did he fight any battles, except with himself and the forces of ignorance, apathy, and indifference. Hardships and misfortunes, blindness and poverty, have fallen to his lot, to be cheerfully borne and courageously overcome. Hope and courage have been the keynotes of

his career, just as energy, self-reliance, and perseverance are the dominant traits of his character. A native of the Southern States, he is best known for his splendid work for the blind in England. As Mr. W. T. Stead has written: "Francis Joseph Campbell is an American by birth, presumably Scotch by origin, English by residence; but his real fatherland is the Kingdom of the Blind."

He was born in Franklin County, Tennessee, on 9th October, 1834. When between three and four years of age, while at play, an acacia thorn ran into his eye. It pierced the eyeball, and inflammation supervened. Through incapacity or neglect on the doctor's part, the inflammation was permitted to affect the other eye, and to continue until the sight of both was utterly and irretrievably lost. Little Joseph was too young to realise his loss, but his affliction was a terrible blow to his parents. With a too loving forbearance they allowed him to do exactly as he pleased. Even at this early age he must have been no ordinary child, else he would have been spoiled by this well-meant but mistaken indulgence. The family circle was a very happy one. The blind boy loved his father and mother and brothers, and was idolised by them. Selfishness found no place in his nature, nor was he, like some blind children, apathetic or indolent. On the contrary, he was always bright and energetic, eager to be up and doing.

About the time when Joseph was six years old his father had heavy financial losses. Nothing remained to the Campbells but a small farm in the mountains, where every one of the family had to work early and late to keep the home together. Joseph was an exception. Nobody expected him to do anything; indeed, he was not allowed to use tools or implements

Sir Francis J. Campbell

for fear of hurting himself. Once, however, his father being from home, his mother let him have an axe and some wood to cut. When his father returned he was surprised to find six cords of wood all cut and carefully packed away. He commended the industry of Joseph's two brothers, but when he learned that it was the blind boy himself who had cut the wood, he was so pleased that he bought him a light new axe for his own use. Ever afterwards he took the greatest pains to teach Joseph all sorts of farm work.

Still, occasionally, time hung very heavy on the blind boy's hands. Inevitably he began to feel that craving for knowledge, activity, the companionship of those of his own age, and all that a lonely child (and especially a blind child) lacks. He has since written:—

"But there were times when I was very dull—especially during the season when all the other children went to school. Oh, the anguish of those dreary, idle, lonely days! Long before evening I would wander off on the road to the school, and sit listening for the far off voices of those happy boys and girls coming back from their lessons."

So deep was the impression, so acute the misery—amounting as it did almost to anguish—made on the mind of young Campbell by that enforced lack of occupation, that he has ever since had quite a horror of idleness, particularly in the case of blind people. Since then he has consistently maintained that blind children should have their education commenced as soon as possible, and that they should be taught something to occupy their minds and hands, so that they may learn independence and self-reliance both in work and play.

Joseph Campbell's recollections of things seen before all became dark, are infinitely touching. After the larse of over half a century the memories of the red and white of the clover, and the spring splendours of the orchard are bright and unfaded. The radiance of the southern summer, with its gorgeous bloom and beauty, lives with him still as some of the last sights that met his eyes before the veil of darkness fell over his vision. He has given some vivid impressions of his last seeing hours:—

"Then the stars. I wonder if other children love the stars as I did? As my sight faded, my mother took me out every night before putting me to bed, and made me look up at them from the piazza. Little by little the curtain was drawn; one night I could see nothing. 'Why is it so dark—why does not God light up the stars for your little boy?' I remember to this day the tears which fell on my face as she carried me up to bed."

"One vivid recollection, just before I became quite blind, influenced my whole life," writes Mr. Campbell. "Wheat-threshing was going on; I sat playing in the straw; our old coloured nurse, Aunt Maria, somehow got into disgrace. I heard the stern order, 'Bring the cow-hide,' and saw, and shall never forget, the instrument of torture, and poor Aunt Maria kneeling before it, begging for mercy. I have been an Abolitionist ever since, thank God!"

It was not until Joseph was nearly ten years of age that the opportunity came of sending him to school. In 1844 a school for the blind was opened at Nashville, and the Campbells heard that on the 1st April ten blind children would be received there. Campbell has since written:—

Sir Francis J. Campbell

"Day after day my father went to the village five miles off to make arrangements for me, and came back saying, 'Melinda, I cannot do it.' My mother, a brave, noble-hearted woman, would answer, 'James, we must do it; it is the one thing we have been praying for, we shall lose our chance; the school may be soon full, and then——'"

So she and the neighbours persuaded Mr. Campbell, and he purchased the necessary outfit. A "sewing-bee" was held to make Joseph's clothes, and in twenty-four hours the blind boy was ready to start. A kind old gentleman volunteered to take him in his buggy to Nashville. Joseph's father went with them part of the way. When he said in a choked voice, "Good-bye, Joseph, my son!" for the first time the blind boy's courage failed.

Joseph had hoped that the school might be full, but only one other pupil had up to that time arrived. Our hero was taken to the schoolroom, and the New Testament in embossed letters was put into his hands. He was so eager to begin to learn, that there and then the teacher sat down beside him, and in three-quarters of an hour the boy had learned the whole alphabet.

For a young lad who was homesick and naturally reluctant to go to school, Joseph's avidity for learning, his promptness in beginning, and his rapid progress in its acquirement, were remarkable. Nor was this a passing phase. Throughout his life his craving for knowledge, and his perseverance and persistence in learning have been amongst his most marked characteristics.

The Nashville school was at first more like a family circle than the usual institution for the blind. There was Mr. Churchman, the Principal, who was himself

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blind, his kindly and considerate wife, and the two pupils. The latter took all their lessons in the Churchmans' private room. But soon more pupils began to arrive, and regular school work had to begin. Young Campbell recalls the music lessons in particular most vividly. Here is a passage culled from his recollections of those youthful days:—

"I shall never forget my first singing lesson. I had succeeded so well in my other studies, that the teacher called upon me first. He sounded A. I opened my mouth, but the result must have been very funny, to judge by the effect produced on my listeners. I was asked to 'sing a tune' in vain; then the teacher hummed one for me to imitate, also in vain. It was discovered that I could not tell one tune from another."

He was considered hopeless as a musician, was told that he could never learn music, but must take to basket and brush making. Piano lessons were in his case considered to be a waste of time, and were forbidden; the other boys laughed at him; he felt as if he were left out in the cold. All this was the more remarkable when we know that he came to have, not only a working knowledge of music, but to become a versatile and wellequipped teacher of the art. He took the first steps towards proficiency there and then. Young as he was he was made of stern stuff, and was determined not to be beaten. He had resolved to master music, and master it he would. He hired one of the boys secretly to give him lessons in music, and he practised whenever opportunity offered. Three months later the music-master, who was also blind, accidentally entering the room, asked:-

"Who is that playing the new lesson so well?"

'I, sir.' 'You, Josie, you cannot play! Come here, what have you learnt?' 'All that you have taught the other boys, sir.' The teacher laughed. 'Well, then, sit down and play the instruction-book through from the beginning.'"

Joseph did as he was bid, and fifteen months afterwards he gained the school prize for pianoforte playing. This result, unaided as it was by any marked talent except an infinite capacity for taking pains, was not attained without strenuous effort and dogged determination. He had to face and overcome all sorts of difficulties. The school was poorly equipped and could only boast of one piano, on which there were so many to play, that young Campbell had to rise early and practise from four to seven a.m. That winter of 1845-46 was intensely cold at Nashville, the river being frozen over. Coal was not to be had, and for a whole month there was only a single fire in the school. Very few lessons were done, but Joseph, with unusual tenacity, practised for five or six hours daily, working for half an hour, then rushing out into the playground, running round it ten times (which made a mile), and went back to the piano again.

Such a rigorous training as this was calculated to make Joseph into a hardy fellow. He was just as daring and venturesome as most boys of his age. As he grew older and stronger he used to accompany his brothers on their hunting and fishing expeditions. Having good nerves and not knowing the meaning of fear, the blind boy became quite an expert climber, and would ascend the most inaccessible mountain sides. He could climb any tree he could clasp with his arms. He was also fond of horses.

Campbell narrates an episode of his College days

which tends to show that he was, even as a youth, a leader among his fellows, and something of a reformer, not to say a revolutionary. The question at issue was to the boys the serious one of the food supply. As will be seen, it had its humorous side. He writes:—

"We were informed that the low funds of the school made rigid economy necessary. But while we lived poorly, we knew that our teachers lived exceedingly well. Not that we could see the roast turkeys, geese, etc., but we could smell them. Our remonstrances were in vain. We called an 'indignation' meeting. After much time wasted in talking, I urged that a small committee should be appointed—three of us. Though I was the youngest they made me one. That night, when all were asleep, I managed to get into the larder, and finding there a quantity of dainty food, pies, jellies, etc., took away specimens of it, and also of our food, the miserable bread, butter, and sausages given us daily. With this tell-tale basket in my possession, I dared not go to sleep, but waited till half-past five, when the bell summoned us to rise and go for our walk. During the walk I left my basket with Aunt Sarah, a coloured woman I knew who kept a shop. In the afternoon I reclaimed it, and carried it to the President of the Board, a kind old gentleman, to whom I told my story. He disbelieved me. 'Boy, this will never do.' 'Would you see the food, sir?' 'Yes, then I will believe, and not till then.' I produced the basket, and he did believe. He asked me in a tremulous voice how I got at the things, and I told him the whole truth. 'Boy,' said he, 'that was a very daring thing to do, but plucky nevertheless. Leave those things with me, and I will see to the matter.' He did, for we heard that next afternoon a special meeting of Directors was called,

and within a few days it became known that the Principal had resigned. Whether he ever knew the part I had had in the affair I cannot tell, but certainly

I myself have never regretted it."

Pecuniary difficulties still dogged the family fortunes. The Campbell farm was heavily mortgaged; Joseph's father could not afford to give him a university education, the son's most cherished ambition. So the blind lad resolved to earn the money and educate himself. The only way he could think of to raise money was by giving music lessons. So he contrived to secure two young lady pupils—sisters. But difficulties hitherto unrealised presented themselves. To use his own words:—

"One of these young ladies seated herself at the piano—I sat beside her. 'What shall I do?' she said. Now I could play brilliant pieces. As a blind boy-pianist I had been petted and praised—I thought myself a wonderful musician. But my knowledge was superficial; I had not been trained in the art of teaching. What did I really know? How was the music written? How, above all, was I to teach a sighted person? And I must teach. It was my only way of getting education."

He asked the young ladies just to play to him that day, and told them that they would make a proper beginning the following week. He pondered over the question carefully. Even to live he must earn money, and to educate himself he must make a good deal of money. His musical abilities, which he had depended on, had so far failed him. His teacher at the blind school evidently had not known his business. Having wrestled with the problem he at length came to a decision, and with characteristic impetuosity put it into action; as he himself has told us:—

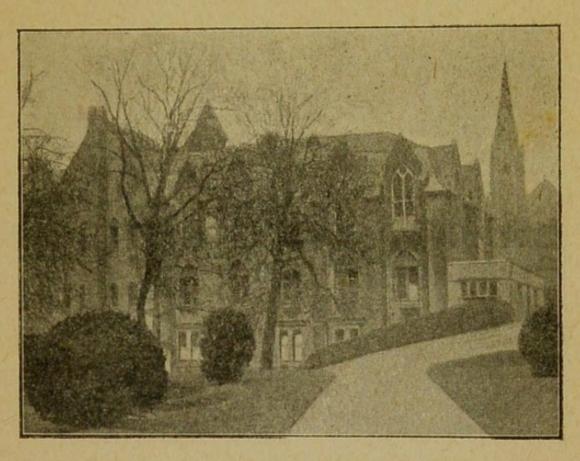
"That night I went to find a Mr. Taylor, an Englishman, pupil of Moscheles and Mendels sohn—one of the best pianists in America. But he had had an unhappy life, and was considered a sort of bear. Not asking me to sit down, he inquired what I wanted. I stammered out, 'Mr. Taylor, I am a fool.' 'Well, Joseph, my boy, I knew that. I have always known it; but it is less your fault than that of your teachers!' Then I told him my story, and implored him to let me begin music again under his guidance from the very beginning."

There was some difficulty in arranging with Joseph's old teacher, who was a violinist rather than a teacher of the piano. But thanks to the blind boy's persistence, matters were quickly arranged. Within a few days he had his first lesson from Mr. Taylor. It lasted four hours. Next day his own two pupils had their first lesson from him. So rapidly did he attain proficiency as a teacher that only a year later, when he was but sixteen years of age, he was appointed teacher of music in the very institution where he had first been told he could never learn music!

Young Campbell's experience was contrary to the generally accepted theory that musicians are born, not made. Some musicians hold that it is worse than useless to try to teach music to anyone who has not the artistic temperament, or at least a taste or an ear for music. Others, on the contrary, maintain that everyone has a voice and an ear that are more or less capable of cultivation, musically speaking. Either of these contentions may be true, but it is largely a matter of degree and of individual gifts. Some amount of ability is essential, but perseverance and concentration will work wonders even in music, and it was precisely in these qualities that Campbell excelled. He was

neither a genius nor a musical prodigy, but he had undoubted talent and unwearying industry. He spared no effort to master the technique of his chosen art. To his energetic nature toil was nothing, the mastering of a subject everything.

He shared too with his fellow-blind the delicacy of touch and the acuteness of hearing which is their



ROYAL NORMAL COLLEGE, UPPER NORWOOD .

peculiar prerogative, and which befits them in a special manner for the profession of music. Here, at least, he felt that he could meet all comers on a basis of independence and equal opportunities. In after life he always taught and advised that the musical profession was one of the best suited and most fitting for the sightless. Certainly music is not the least important province of the kingdom of the blind.

Nor was it merely his own personal experience that musical ability is not necessarily innate. He found it to be the case repeatedly among his pupils, the majority of whom manifested no marked musical talent, but responded to a training at once practical and comprehensive, based as it was upon experience and adapted to the various and ascertained needs of each individual.

So Francis Joseph Campbell may be said to have begun to carve out his own career. He was ambitious and independent. While maintaining himself by giving music lessons, he contrived to find time to improve his own education in other respects. His College curriculum included mathematics, Latin, and Greek. Mathematical studies he found quite congenial, but he had little liking for the classics; in fact, they were to him "positive drudgery." Still he did not neglect or abandon his classical studies on that account. His dogged determination to succeed carried him through, and even in the uncongenial classics he was so successful that he was complimented by his professor.

Though extremely intelligent and quick and eager to learn, young Campbell was not primarily a student. His mind was intensely and essentially practical, and what phrenologists would call his "bump of initiative"

was well developed.

Even at this early stage in his career Campbell was leading a busy and strenuous life. He was animated by two important considerations. First, there was the absolute necessity of earning his own livelihood; and secondly, and quite as imperative to him, there was his ambition and the keen desire for learning—the end and the means. Like many another young and ardent student he burned the midnight oil, or at least worked late and early. He writes:—

"At this time, on account of my teaching and daily attendance at the College, I was obliged to work day and night as well. I employed two readers: one read for me till ten p.m., then I went to bed with an alarum clock set at two a.m. When it sounded I sprang up, dragged my second reader out of bed, and as quickly as

possible resumed my work."

No one could stand such a strain for long. The wonder is that even with his iron will and wiry frame, young Campbell was able to endure it as long as he did. At length, however, came the inevitable collapse. He was taken suddenly and seriously ill. The doctor told him that unless he took three months' holiday he had not long to live. At first the headstrong youth refused to give up his work, but common sense prevailed. He was taken to the station and then home, simply inquiring if his books were packed. "Yes," replied the doctor sagely, "packed where you will never find them." So he had perforce to go on his long holiday practically bookless. He decided to spend this enforced vacation at the mountain springs, where several families had built themselves summer cottages. Young Campbell has written some vivid impressions of his holiday.

His brother, a friend, and Joseph himself set out for their destination on foot. The first carried a rifle, the second a bag of books which the blind boy had contrived to smuggle through, while he himself carried an axe. They reached the springs late at night and received a hearty welcome. The blind youth was not very strong, but a long sleep made him fit again. Next morning the three boys pushed on to a cabin five miles farther on, which belonged to the Campbells' uncle, and which was occasionally occupied by his men when tending cattle on the hills. It was a good deal out of repair

'But," writes Joseph Campbell, "I only wanted a place to sleep in at night and to shelter me when it rained." The uncle's house lay two miles away, and his kindly wife promised to supply the lads with food on condition that they called for it; so that the commissariat was well provided for.

It was in primitive and healthful surroundings such as these that Joseph began to lead the simple life and to take the "rest-cure." But rest, in the sense of idleness, was foreign to his nature. He had to be up and doing, finding the truest recreation in a change of work.

He has written with gusto of his exploits:-

"Our first few days we spent in reconnoitring our surroundings. The hut stood within a few feet of the brow of the mountain. If I threw a stone down, I could hear it bounding down for ever so long. By and by I learnt to clamber up and down this cliff, and found ten enormous trees growing there, one above the other, the upper one being only a few feet from the hut door, the lowest about two hundred feet beneath. So I planned and proposed what backwoodsmen call a 'cataract,' and sallied forth, axe in hand, to attack my first tree, about four feet in diameter. My strength was below par. I got on slowly. The other two laughed at me, and suggested I should ask for help. But my brother was always out hunting, and he and the other lad took turns at fetching our food, and in reading to me of evenings. The weather was glorious; I soon drank in health at every pore, and was able to cut the whole ten trees, three parts through, in about a month.

"At last all was ready. The biggest tree, the one next to our hut, was hewn through, except a very small bit, and prepared to fall. We were greatly excited, for the success of my plan depended upon the way the trees,

beginning with the lowest, had been cut, so as to fall straight. I examined all, one by one, then climbed back to the topmost tree, and applied my axe vigorously. Ten minutes more and I heard my brother call out, 'Hurrah, it's going!' We all leaped aside lest we should be struck by the falling branches. What a turmoil! Tree after tree began to go, each pressing upon each, till the whole of them went plunging down the mountain side. The topmost one finally found a resting-place far below. Triumphant with success, we three boys shouted and threw up our hats, and finally we brought our supper and laid it out in the stump of the huge tree which completed our 'cataract.'"

The blind lad who could plan and carry out, practically unaided, such a gigantic piece of work, almost heroic both in conception and execution, was a youth cast in no ordinary mould. So vigorous and wholesome a holiday, spent practically in the open air, soon recruited his health, and on the termination of the three months' vacation, which he had agreed to take, he returned to his duties full of renewed energy, vitality, and enthusiasm. He felt the immense benefit he had derived, both physically and mentally, from the change, and gradually became converted to the belief that physical training is of the most vital importance to the blind. Later in life, as we shall see, this early lesson had its effect. He was a pioneer in his consistent advocacy of the advantages and necessity of physical training for the blind-first, to overcome nervousness and timidity; secondly, to improve and maintain the general health; and thirdly, to inculcate independence or self-reliance.

But at that time Francis Joseph Campbell had still his own way to make. On his return to Nashville he

concentrated all his energies on his dual task of educating himself and teaching others. The Tennessee School for the Blind was short of pupils. The parents of blind children in the State evidently did not realise the advantages of giving them a good education. Clearly some propaganda work was necessary, and young Campbell was obviously the very man for the work. He was requested to make a brief vacation tour through Tennessee, and having traced the blind children by means of the census returns, to try to induce their parents to send them to the school of which he himself was a pupil. This was a task very much to his taste, and he accepted it with alacrity. There was the open-air life-for most of the time was spent in travelling over the rough roads, there being then but few railways in Tennessee-and as it turned out, plenty of adventure. There was, too, scope for his enterprise and his eloquence in appealing to the parents to send their blind children to receive the education of which he spoke in such glowing terms.

Accompanied only by a young friend, Campbell started off on his mare, Nelly, from his own home in Franklin county. His adventures, narrated in his own inimitable fashion, make good reading. Knowing the census was anything but perfect, he visited all the schools, called upon all the doctors, clergymen, and even blacksmiths—for, as he shrewdly judged, country folks always gossip while their horses are being shod—and by the end of the first week had found three blind children to send to Nashville. To reach the home of one boy he had to cross the Hywassie, a mountain torrent. But let him tell the story in his own words:—

"There were no bridges over it, but there was a ferry and a ford, the former only used when the latter

was impassable. Nobody told us of it, so we rode into the stream and soon found ourselves plunged over a steep bank into deep water. It was my first experience of the kind; I called to George to let his horse go as free as possible, soothed Nelly, and sat perfectly still on her back. She neither returned, nor tried to climb up the bank, but with true instinct swam diagonally, till we gained the opposite shore. There the ferryman called out to us, and explained how we had missed the ford, adding that he would not have crossed as we did for a thousand dollars. We were wet through, but soon dried in the July sun of Tennessee. I found my little blind boy, arranged with his parents, took him up behind me on Nelly, rode to meet the other two boys at a station, and placed them all in charge of the conductor of the Nashville train, while I went farther in search of other children."

It was a unique task for a blind man, this travelling in all directions across wild and lonely country, and by the most primitive and ill-defined tracks. Tennessee covers an area larger than that of Ireland, and was, in the early part of last century, but sparsely populated. Young Campbell was accompanied only by an inexperienced companion, who was nominally the guide. the moving spirit was that of the blind man. fearless manner in which he went through their many adventures is sufficient testimony to his courage and self-reliance; and the cool way in which he refers to drying in the sun after his immersion in the Hywassie speaks volumes for his hardihood and optimism. But the tale of his adventures is not yet complete. found by the census that a little blind girl resided on a mountain side forty miles away. He and his companion started off. He writes :-

"Our route was by Catawba river, then up a swift watercourse called Elk Creek, which, much swollen by recent rains, wound to and fro through a long gorge. We crossed it, I counted, nineteen times. Late in the afternoon we left this watercourse and followed the zigzag path to the top of the Flint Mountain, which we reached at sunset, but had still four miles farther to go. George was no mountaineer but a city boy. Completely worn out with fatigue, he asked 'if I meant to camp out all night?' At that minute we heard a deep roll of thunder, mountain thunder, and at once the storm was upon us. Our horses became unmanageable; we had to dismount and hold them. The storm ended in total darkness. We decided to go back. George declared it was impossible to find the path. So I bade him hold the horses while I found it. Then I went ahead, leading Nelly. I should have felt no fear-but for rattlesnakes, of which I knew thirty had been killed during the summer. When the path grew smooth we mounted; but my hand shook so I could scarcely hold the bridle. It rained still, and George declared he could see nothing. So I kept the leadtelling him I could find the way by the sound of the waterfall, which I heard. But my real trust was in Nelly. We came back to the creek, which we had to cross. At first I hesitated, but Nelly did not. My feet went under water, and I thought all was lost, but this proved to be the deepest part; we were soon safely over."

So did this intrepid and resourceful young blind man turn guide when the need arose, and the sight of others failed in the darkness which held no terrors for him; nor was he afraid to trust to an instinct even surer than his own—that of his horse—in a moment

of emergency. His mission was almost uniformly successful. The parents of the blind children were induced to part with them, they were put upon Nelly's back and carried sometimes fifty miles. One little girl came at first willingly out of the keeping of a drunken father, but then took to screaming and kicking until her blind protector calmed her, wrapped her in a sheepskin, and strapped her to him in the saddle, when she went peacefully to sleep. Thus burdened he rode many miles on the road to Knoxville. Many more protégées did Campbell succeed in having given into his keeping. He found the mothers of the children much easier to convince of the advantages of special education than the fathers, but he generally succeeded in bringing even the latter to his own way of thinking. He concludes the story of his expedition in this wise :-

"I had spent about four times the money voted to me for this tour; had it failed I should have been severely blamed. But it succeeded, and the extra sum was cheerfully paid."

We have here the true spirit of enterprise, not simply the humdrum execution of orders, but the exceeding of them. Campbell, running the risk of censure, was urged onward by the conviction of ultimate success, to its attainment and fitting reward. He remarks with justifiable pride, too, that his little protégées did well, and records that years after, when he was teaching in Boston, two of them sent him tokens of remembrance.

Mr. Campbell resigned his connection with the Tennessee Institution for the Blind in 1856 and went north, bent on realising the dream of his life and studying at Harvard University. He had previously

spent a few months at Bridgewater, where he met a certain Miss Bond. Their acquaintance quickly ripened into the warmer feelings of affection and love, and in August of the same year they were married. Within a month of his wedding-day, the firm to which he had entrusted all his savings suddenly failed, and he lost all he had, except a hundred dollars which he happened to have in his own possession. He had reached a crisis in his affairs, but was equally rapid in decision and prompt in action. Two days later he was on his way south with his wife. He secured the position of musical director of a large and flourishing girls' school in his native state of Tennessee. Once more life's horizon seemed serene and unclouded, but he was fated not to be left long in peace.

It has been said that Campbell was an opponent of slavery from his youth up. During his stay at Harvard he came under the influence of Mr. Lloyd Garrison's Liberator, and when he returned to Tennessee, a copy of this Abolitionist organ was sent to his address. It was confiscated at the local post-office, and Campbell was posted as one suspected of Abolitionist sympathies. Feeling on the slavery question was running very high in the Southern States, and those passions were even then smouldering fiercely which afterwards flamed out into all the horrors of the Civil War. Vigilance Committees or Committees of Public Safety were formed to rid the various Southern States of Abolitionists. Campbell was placed under surveillance, and it was found that he was actually teaching a negro to read. A deputation from the local committee waited upon him and tried to induce him to change his Abolitionist opinions, but in vain. Finding argument unavailing, they had recourse to threats, and as he refused to pledge himself in any

way, they left him, with the message: "We give you twenty-four hours in which to reconsider your decision. If at the end of that time you still refuse, we shall string you up to the limb of the most convenient tree."

The public opinion of the community was, however, against the committee. Campbell's blindness saved him. It was felt that it was too cruel to hang a blind man, but although they shrank from taking away his life, they did not hesitate to deprive him of his livelihood. He was boycotted. No good Southerner would allow his child to be taught music by an Abolitionist, and his classes were deserted. The end was inevitable, and the blind teacher had to leave the place where he had hoped to make his home. So began his long exile from his native state; in this wise did he become an exile for the sake of principle.

Going north again, Mr. Campbell found temporary work at the Wisconsin Institution for the Blind. Then his wife fell ill, and he had to take her to Boston for medical advice. "At this time," he says, "we were so poor that my own food never cost me more than sixpence per day." They were indeed hard pressed, living in a strange city—his wife a private patient in hospital, and he himself only occupied in an uncertain

search for employment.

He decided to visit the Perkins Institution, of which the famous Dr. Howe was then principal. Having secured the necessary permission, he spent a day inspecting the Institution, paying special attention to the musical side. The Principal asked him what he thought of the latter. Mr. Campbell's answer was expressive of complete dissatisfaction. He was not surprised to learn that music had been for some time a total failure in the school.

6

Dr. Howe offered to put him in the sighted teacher's place at half his salary, but this the blind man spiritedly refused. "You employ me," he said, "because you think I should do better than a sighted man. I will not be underpaid, but if you like, I will teach one term for nothing." Having secured some private pupils he could afford to do this. His offer was accepted, and the experiment was tried. It proved a complete success.

Mr. Campbell was formally installed as head of the musical department of the Perkins Institution. He immediately instituted two reforms. One was the "scrapping" of all the old worn-out pianos, the other the option of choosing twenty blind boys and girls to be educated physically and mentally, as well as musically, according to his own ideas. He chose these pupils for their general intelligence, rejecting those who were simply musical prodigies and nothing more.

His greatest difficulty then, as throughout all his experience, was the low physical condition of the blind. In educating them he advocated that no effort should be spared to make good this deficiency, so giving the blind student self-confidence and some spirit of emulation and ambition. "It is useless," he said, "to say to the blind, 'Go!'-the word must be 'Come!'" And he was then and always as good as his word. He used to take his blind boys daily to swim in the open sea, and also for long rowing expeditions. Once they chartered a schooner, and went far out to sea, fishing. He led one party of them up Mount Mansfield and another up Mount Washington. A Southerner himself, he had never been on the ice. But skating struck him as an invigorating pastime, and he proceeded, with characteristic energy, to prove that it was possible for

the blind to learn to skate, by doing so himself. Then he insisted on his boys learning too.

In the winter of 1861 Mr. Campbell's lungs became affected. Dr. Howe urged him to take a voyage to South America, warning him that otherwise he would not live a year. This advice, however, did not produce the usual effect, for Campbell was no ordinary man. He decided that if his life was to be short, he must do as much as possible in the time. He devoted increased attention to outdoor sports, and had an open fire, avoiding the hot air of the Boston stoves. Those were all the precautions he took, but they proved sufficient, and his life, fortunately for his fellow-blind, was mercifully spared for many years to come. He retained his position at the Perkins Institution for eleven years. This long connection was an entire success. It was a splendid period of training, and a field of experience which proved to be an invaluable part of his unique equipment for his future work on behalf of the

Again, during the winter of 1868-69, Mr. Campbell's health broke down. In addition to his teaching, and other labours on behalf of the blind, he had to undergo painful domestic trials and anxieties. His wife had become a confirmed invalid. Frequently, after working all day, he had to come home and sit up all night, nursing his sick wife. Dr. Howe and the trustees of the Institution urged him to take a year's vacation and a trip to Europe. The Harvard Musical Association of Boston gave a grand concert and presented him with the proceeds. Eventually, in August, 1869, Mr. Campbell, with his wife and son, sailed from New York to Liverpool. His travels, begun for health reasons, were continuously utilised for the observation,

examination, and study of everything that in any way concerned the blind—the latest ideas in methods of teaching, in books and appliances, and so on. We see him now completing his equipment of knowledge and research which enabled him to carry out his great lifework of improving the education and condition of the blind.

As has been said, Campbell had great faith in the possibilities of music as a profession for the sightless. He had conceived the idea of establishing a first-class Conservatorium of Music for the blind in connection with one of the American universities. In pursuance of this idea he was attracted to Leipsic by the fame of the Conservatoire of Music. He arrived there about the middle of October, 1869, and called upon Professor Moscheles.

"What is it that you want?" he was asked.

"I want the freedom of the Conservatoire," he replied, "to go into all the classes, to study all the methods of all the different professors, with the view of founding a similar institution in the New World."

It was a bold demand, but nothing venture nothing win! Professor Moscheles was attracted by the frank audacity of the request, and at once granted the required permission. For six months Campbell haunted the Conservatoire, studying the art of music in all its phases and the best methods of teaching, and being aided in his studies by Professor Moscheles. Then he went on to Berlin and became a private pupil of Professor Theodore Kullack, whose Conservatoire, as also that of Karl Tausig, he attended, and whose methods of instruction he studied, and acquired with his customary thoroughness. After visiting other cities of the Old World, he turned his steps homewards a wiser and a

healthier man. He arrived in London on 20th January, 1871, and booked his passage from Liverpool for the 23rd of the same month.

On the very first evening after his arrival in London Mr. Campbell was invited by a fellow guest at his hotel to accompany him to a blind tea-meeting. Always interested in anything concerning the blind, Campbell at once accepted the invitation. He has described that evening as one of the saddest he ever spent. The tea-party was the usual charitable affair, where the indigent blind were regaled with tea and cakes, and in return expressed their gratitude to the donors of the same. They were indeed grateful in proportion to the value of the gifts, but to Campbell, who quickly got into conversation with many of them, they spoke, as to a fellow-sufferer, of their fierce resentment against the hopelessness of their lot. They brought home to him with overpowering force the tragedy of the untrained and helpless. He realised as he had never done before that these hundreds of men, afflicted through no fault of their own, might by proper training be transformed from objects of charity into self-supporting and useful members of society. Returning to his hotel, he spent a sleepless night, and next morning he told his wife that they should not sail as planned. This casual visit to a blind tea-meeting was to have consequences quite unforeseen. It was destined to alter the whole future course of his life.

Next day Mr. Campbell, who held a letter of introduction to Dr. Armitage, presented it to that well-known philanthropist. Himself nearly blind, he had in 1868 founded the British and Foreign Blind Association, and was considered to be the leading authority in England on all questions relating to the

sightless. Dr. Armitage soon recognised in Campbell a fellow expert, and the two at once proceeded to compare notes. They visited most of the London schools and workshops. In complete agreement that many reforms and improvements in the education and training of the blind were absolutely essential and imperative, they immediately set about trying to secure their introduction into existing institutions. But all in vain! Even those who had lost their sight were reluctant to accept what they considered to be newfangled theories and ideas.

Weeks passed, and Mr. Campbell—absorbed in these inquiries and investigations into the condition of the blind in England, undertaken in collaboration with Dr. Armitage—had to keep postponing his departure for America. In the following May, as these two friends and co-workers were walking across Hyde Park, Dr. Armitage asked:—

"What will it cost to start a small school and try the experiment for two years?"

"£3000," laconically replied his American friend.

"Then," said Dr. Armitage, "I will give £1000 if the other £2000 can be raised."

For a time it seemed as if the balance of the money necessary could not be raised. Campbell had indeed given up the idea, and one Monday morning began to pack, preparatory to sailing for America. Just in the nick of time, however, came a welcome letter from Mr. (now Sir) Wm. Mather, then M.P. for Gorton, enclosing a cheque and promising more. Provided with the sinews of war, the campaign then began in earnest. Dr. Armitage and Professor Fawcett wrote letters to the Times, while the indefatigable Campbell visited Leeds, Liverpool, Manchester, Glasgow, and Edinburgh,

so that by November the £3000 was raised, and a

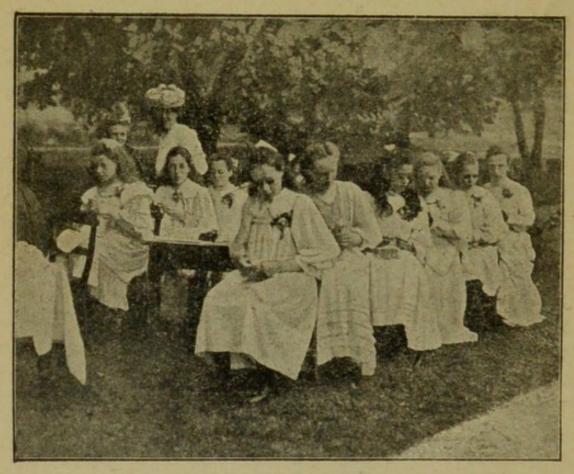
beginning became possible.

In February, 1872, three small houses were taken in Paxton Terrace, near the Crystal Palace, for use as a school. A beginning was made with two pupils, but by the middle of May there were so many that it became possible to organise regular school work. Two lady teachers, Miss Green and Miss Faulkner, an American lady, were engaged; and Mr. Campbell, the Principal, in addition to his other duties, gave the musical instruction himself. The number of pupils steadily increased, and the progress of the school generally, under the blind Principal's wise and enterprising direction, was so satisfactory that it was felt that new and more suitable premises might justifiably be secured. Mr. Campbell heard of a much larger house on the top of the hill. "I was resolved," he said, "that before the two years' experiment was ended, broad foundations should be laid for permanent usefulness." His efforts were crowned with success in the following year. By the generous assistance of the Duke, then Marquis, of Westminster, the late Henry Gardner, and others, the house and grounds which formed the nucleus of the present Royal Normal College for the Blind in Upper Norwood were purchased. In October, 1873, the removal to the new premises was effected.

Mr. Campbell's private life had just been overshadowed by a great grief, his beloved wife having passed away in the previous August, leaving her blind husband with an only son. But private bereavement could not be allowed to hinder the great public work to which our hero had put his hand.

He now found himself in a position to realise some of the ambitions of his life. Dr. Armitage took a leading

part in securing the new site and in furnishing the new institution. He contributed liberally to the library building, made himself responsible for the equipment of the gymnasium and the swimming bath—an important feature, and presented the organ for the music hall. The energetic and untiring Principal took a keen and personal interest in every detail of the organisation of



BLIND GIRLS OF THE ROYAL NORMAL COLLEGE AT NEEDLEWORK

the College. Every inch of the grounds was laid out in accordance with his ideas, and there was not a detail of either the curriculum or the housekeeping that escaped his attention.

In the summer of 1874 Mr. Campbell took a wellearned holiday, and revisited his native land. There he again met Miss Faulkner, who had been one of the first teachers at the Paxton Terrace School, but had

later returned to America. They were both very much interested in the blind, and compared notes and experiences, visiting several institutions together. Campbell afterwards revisited his old home in Tennessee, from which he had been so long absent, and also many other familiar places. Finally, after a pleasant holiday, he returned to England and again devoted himself to his work. But before long he found, as he simply and touchingly put it, that he "could not work alone." Once again he went to America, where he married Miss Faulkner and brought her back as his second wife.

"Since then," wrote Mrs. Craik in her biographical sketch, "Light In Darkness," "all has prospered with him and his work, in which he and his helpmate go hand in hand. Self-reliant as he is, her bright, active, intelligent aid, as well as that of his eldest son by his first marriage, is not unwelcome to this happy and independent blind man, who goes about among his sighted family as capable as any of them all."

The same authoress has written of Dr. Campbell's personality. "A little man of unimpressive appearance, whose chief characteristic seemed to be a quiet decision of speech, and an energetic way of moving about as if not blind at all; a person eminently 'all there'—neither self-occupied nor preoccupied—but alive to everything around him, putting out feelers as it were on very side, so as to take in all that was passing and make use of it."

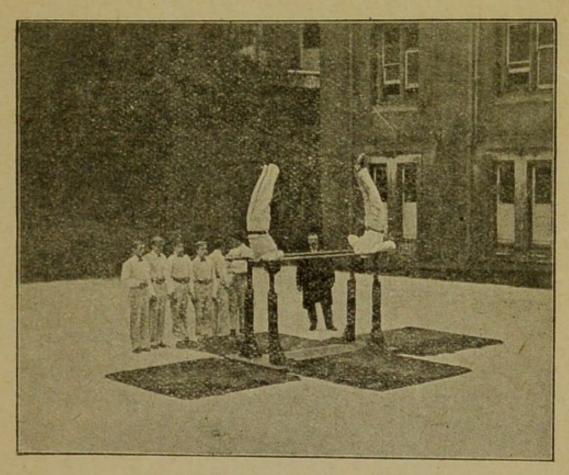
Lord Playfair also noticed this latter phase of Mr. Campbell's mentality, which he called the "intro-receptive faculty," and which, in the case of such intelligent blind people, becomes almost a substitute for sight. They are able, from their friends' descriptions

of things around them, to form such a perfect mental picture of the things described, as almost to make them believe that they can actually see the objects. As Dr. Campbell has said, no two persons ever see a thing in the same way; each sees it differently; in conversation they each give a separate and distinct idea, and the blind person benefits from the ideas of all. So they really would seem to have a power of seeing with several other people's eyes, which compensates them, in a measure, for the loss of their own.

This bright and fearless little blind man has imbued the personnel and pupils of the College, of which he is Principal, with his own spirit of enthusiasm, optimism, and courage. The inmates of the Royal Normal College have often been described as a happy family, and the history of the institution is one of progress and hopefulness.

Mr. Campbell has said: "The one aim of my life has been to raise the status of the blind and enable them to compete on equal terms with the sighted." At the Normal College the standard of education for the blind is in every respect similar to that for the seeing elsewhere. But the sagacious Principal, remembering his own experience, does not permit his pupils to develop their intellect at the expense of their physical wellbeing. First of all, his system is intended to overcome the timidity natural to the sightless, then when the pupils gain confidence and come to know the College and the grounds, which are specially laid out to prevent stumbling on the part of the blind, they are required to spend a certain time every day in gymnastic exercises. These are carefully arranged to suit each pupil, to develop the muscles and chest without imposing any undue strain, and so raise the physical tone and vitality,

which in the blind are frequently below the normal. The College gymnasium is one of the best equipped in London, being replete with all the latest English, German, Swedish, and American apparatus. Nor do the blind pupils look upon this physical training as a task; they have caught something of the enthusiasm of the Principal and his staff; chief of which is Mr. Guy



BLIND BOYS AT GYMNASTIC EXERCISES

Campbell, the eldest son of Sir Francis. They are encouraged to take every form of outdoor exercise in the spacious and beautiful grounds. There is a swimming bath, a lake for boating in summer and skating in winter, an asphalt cycle-track where the boarders can have a spin on a multicycle before going out on the road, a bowling alley, and an open-air gymnasium, including a giant stride, swings, see-saws,

etc., for the younger pupils. Clearly, every possible precaution is taken to safeguard the physical health of the pupils, which Mr. Campbell believes to be an indispensable preliminary to the training of the mental faculties. Quite recently he has written:—

"The education and training of the blind, whether literary, musical, or mechanical, will not be crowned with practical success unless it is based upon a thorough system of physical development. It is the only thing that will lift the class from a state of semi-helplessness into useful activity, and equip them for their full share of the work of the world."

Nor did he ever ask his pupils to do anything which he was not prepared to do himself. Always his motto has been in training them, not "go" but "come." He has taken part in all their exercises and sports, accompanying them on long cycling expeditions. With his sons he has cycled from Land's End to John o' Groats, through Norway and in Normandy. He has also rowed down the Thames several times from Oxford to London.

But the sport he most enjoyed was mountaineering. In the following letter to the *Times* he describes in his own inimitable fashion the manner in which he made the ascent of Mont Blanc on 5th September, 1880. (He had previously, by the way, had a portable model of the district moulded in relief):—

"My ascent of Mont Blanc was not a sudden, reckless undertaking. It was the result of a fixed purpose, and only undertaken after a long and careful preparation. I thoroughly understood and fully appreciated all the difficulties. In order to carry on my work on behalf of the blind, it is necessary to keep up my pluck, energy, and determination. Skating, swimming, rowing, riding

have all contributed their share to this end, but last year I went to Switzerland to try mountain climbing. The experiment was highly successful. This year I went again, accompanied by my wife, son, and His Highness Prince Alexander George of Hesse. After four weeks' continuous work on the glaciers, and in various mountain huts, I went to Chamounix, and without difficulty achieved the object of my summer's excursion. In company with my son, with Benoit as my leading guide, I attacked Mont Blanc. At first the guides expected to drag me up, but I gave them the choice to leave me to climb in my own way or to give up the undertaking. I was resolved to make an honest climb or give up the ascent. I took my place on the rope in the ordinary way, except that the distance between my son and myself was only a few feet. This enabled me to follow his footsteps closely, and in such places as the very dangerous crevasse near the Grand Plateau we moved in immediate succession. For instance, before he would take the fingers of his right hand out of the hole which had been cut in the ice wall for the purpose, my left hand would touch his right hand and be ready to occupy the hole as soon as he had relinquished it. With the exception of cutting very extraordinary steps for me, the guides during the ascent did not assist me in any way. I was glad to find that the ascent of such steep places as the Bosse was much easier than I had anticipated. The cutting of steps required considerable time, and allowed me at my leisure to prepare for each difficult and dangerous step. Besides carrying an ice-bar, I always take with me in difficult climbs a short walking-stick, which I often use in my right hand as an indicator, and to show the skill which it is possible to attain in this way I

may mention that I did not miss a single step in the entire ascent.

"When I reached the summit Benoit exclaimed, 'Welcome to the summit of Mont Blanc. You are the first and last blind gentleman who will ever stand upon this, the highest peak in Europe.' But my mind was busy. Passing from peak to peak, I went round the entire circle, dwelling on many favourite summits. They had all been carefully studied, and each in its turn brought some new winged hope for the future. It was very cold, and the guides soon reminded us that we must begin the descent. Before doing so however I consecrated my life anew to the blind, and have now returned to England to pursue this one purpose of my life. In difficult climbs I rely entirely on my own careful steps and the strength of my own arm, but in making descents it is otherwise, especially over snow slopes. Here I take the guide's arm, my alpenstock in my other hand, and bound down with great rapidity. We made the descent from the summit to the Grand Mulets in three hours and thirty minutes.

"Afterwards," he continues, "I climbed the Wetterhorn, Eiger, Jungfrau, Eggischorn, and made a determined attack on the Matterhorn. For forty-two hours we were weather-bound in the upper hut on the mountain, but being unable to proceed any farther, we finally descended in one of the most violent thunderstorms that ever raged in that wild region. To add to the ordinary difficulties, the storm broke upon us during the descent of one of the most difficult cliffs upon the entire length of the road."

Dr. Campbell's feats in scaling some of the most difficult of the Alpine summits excited considerable comment, which was of the most diverse kind. Professor

Tyndall, meeting the indomitable little man in the Alps, inquired, as he took his arm, "Are you really blind, or are you only humbug?" But his ascent of Mont Blanc procured for him what, he naïvely admits, he had long laboured in vain to secure,

an Editorial in the Times, which began :-

"What is wanting is that the world should unlearn its long tradition of the disqualification of the blind for a share in the common inheritance of human burdens and rewards. To teach the world that unaccustomed lesson is the object and excuse of efforts like this of Mr. Campbell's. It is not to be imagined that the generality of blind men should parade the Alpine peaks any more than the generality of Englishmen who have long sight. The use of the exploit is the proof it furnishes, that, as with the right training, men who possess five senses can surmount the ascent, so the absence of one of them can be supplied by greater energy in employing the remainder. Mr. Campbell preaches from the loftiest pulpits to his fellow sufferers, not that they commence on a natural level with the community at large, but that they may raise themselves to the same level. . . . The theory of the proper training of the blind, of which Mr. Campbell's conquest of Mont Blanc is an exemplification and fruit, rests upon a principle of yet wider application."

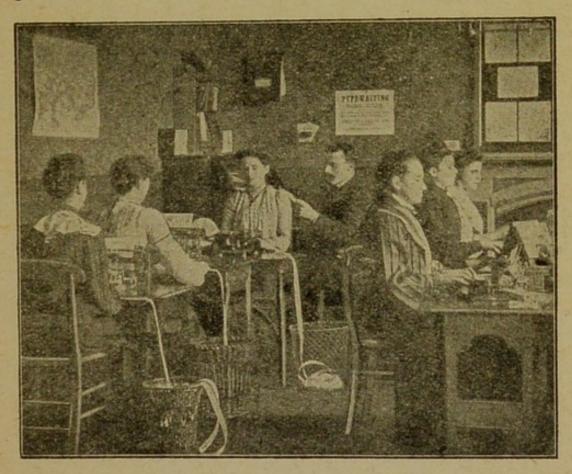
The ideal aimed at by Mr. Campbell and his coadjutors was to make the Royal Normal College not merely a school for the blind, where everything must be judged with pitying reservations, but one where the standard of education in every department would compare favourably with any school in the country. Especially is this the case with the musical curriculum.

In consonance with the principle that the education provided must be equal to that given to the sighted who follow the same occupations, only the best teachers and professors are engaged. One department of the College particularly dear to the Principal is the technical school for instruction in piano-tuning and music. Here with its equipment of four pipe-organs, sixty pianos for teaching, and twenty-six for tuning, hundreds of blind pupils have been taught the art of music, and the technique of tuning, by means of which in after years they have been able to support themselves.

Very early in the history of the College it was realised that it would be to its advantage if the public were given some idea of the musical abilities of the pupils. Five years after the College was opened, the pupils gave their first concert in St. James' Hall, London. The Crystal Palace Orchestra was engaged, and Sir August Manns conducted. The pupils were assisted by Professors Joachim, Fritz Hartvigson, and Petrie. The very fact that these noted artistes were willing to appear at a concert given by the blind scholars of the College attracted public attention. That the musical abilities of the pupils were not unworthy of appearing on the same platform as Professor Joachim and the rest, is proved by the high encomiums called forth at the time from the musical critics of the London press.

Mrs. Craik testifies to the thoroughness of Mr. Campbell's training and the efficiency of his methods. She once listened to a lesson he gave his choir, a five-part chorus from "The Woman of Samaria," which they were trying for the first time. "He read it to them bar by bar, they wrote it down by the Braille

system of notation, and sang it 'at sight' as we say, each separate part and then the whole, with scarcely an error. Afterwards, just for my pleasure and their own, he made them sing another chorus out of the same work, newly learnt, which they gave with a purity of intonation and accuracy of musical reading quite remarkable."



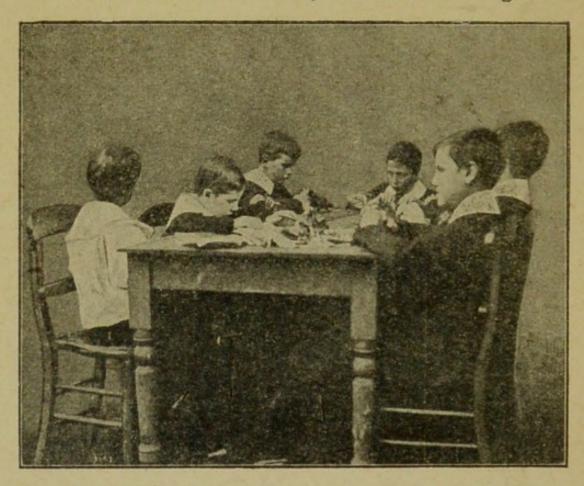
BLIND GIRLS OF THE ROYAL NORMAL COLLEGE TYPING

Of another cantata, the rendering of which she praised, Mr. Campbell spoke deprecatingly: "Yes, but we had little time to practice; I began reading the score in the railway between the Crystal Palace and London only a fortnight before we sang it." A sufficient testimony this to the musical development of the boy who, years before, had been told emphatically that he could never learn music.

7

In the year 1882 the already high standing of Mr. Campbell in the educational world was emphasised and confirmed by his having conferred upon him the honorary degree of LL.D. at Glasgow University.

Through the generosity of Colonel and Mrs. Richardson Gardner, who defrayed all expenses, a concert party from the Royal Normal College was



BLIND BOYS OF THE ROYAL NORMAL COLLEGE LEARNING BOTANY

enabled to visit Brussels and Berlin in 1884. In both capitals their musical ability was highly spoken of. The Principal of the Brussels Conservatory, M. Gevaert, was present at the concert given before the King and Queen of the Belgians, and his words of commendation were unqualified by any concession on account of the performers' affliction. Again, in 1885, the Philharmonic Orchestra of Berlin was

engaged. Professor Karl Klindworth conducted, and a concert was given with two blind soloists.

Still another concert party was organised and sent to America, where they made a tour of the chief cities, including New York, Washington, Boston, and Philadelphia. Everywhere they went they attracted large audiences, and the criticisms were invariably favourable without being partial or unduly indulgent. After a very successful trip, Dr. Campbell, having received a requisition to that effect signed by the Governor, and many prominent citizens of Boston, gave a second concert in that city, the farewell concert of his American tour.

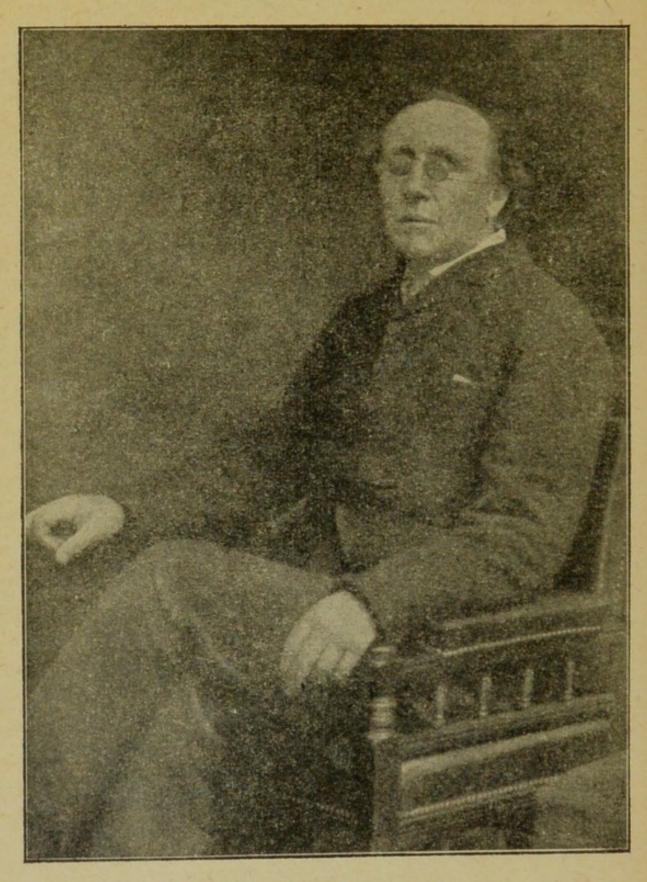
Judging from the fragments of his autobiography which Mrs. Craik incorporated in her essay, "Light in Darkness," Dr. Campbell is gifted with a picturesque and vividly descriptive literary style. The wonder is that he has not found time to write a full and connected account of his interesting career. But then, like a good many men of mark, he has been too busy living his life and doing his life-work to sit down and write about them. From time to time in his later years, becoming recognised as an authority on the education of the blind, he has been asked to read papers before public bodies-notably on "The Education of the Blind," before the International Congress for the Welfare and Protection of Children held in London, 1902, and the Incorporated Society of Musicians; on the "Welfare" and Protection of Children," before the Congress on Physiology and Hygiene, and other papers at the International Congresses on the Blind at Paris and Chicago.

In 1901 Dr. Campbell received the distinction from the French Government of being appointed Officier

d'Academie. But the honour he values most highly was that which, in the year 1909, his late Majesty King Edward VII. conferred upon him, the rank of knighthood. Sir Francis Campbell, as he then became, values the honour not only for itself, but as a recognition of the fact that the education of the blind is now a part of the national system. He considers it, too, as an honour to the blind as a whole, which is a view taken by many of his friends and well-wishers.

Turning now to the later years of Dr. Campbell's long, strenuous, and eventful life, one can only marvel at his perennial youth. He has been true to his ideals, ever practising what he preached. One of the secrets of his unchanging youthfulness is undoubtedly his lifelong devotion to physical exercise and outdoor pursuits. But more even than these, his buoyant nature and unquenchable optimism keep his heart young. He did not, as some men do in later life, crystallise or cease to expand and develop. He still takes a vivid interest in affairs, and most of all in anything that affects his fellow-blind. Mrs. Craik found the keynote of his life in the words of his wife. "He makes use of all his opportunities." But like most other men who have made their mark, he has on occasion made his opportunity and moulded circumstance to his will. He is the veritable embodiment of the modern spirit of efficiency and thoroughness, the pioneer in the introduction of this spirit of strenuousness and endeavour, combined with rational and scientific methods and training, into the kingdom of the blind. He has made the crowning achievement of his life—the Royal Normal College, a City of Light to those who live in darkness.

Energetic, self-reliant, persevering, he has remained faithful to the twin gospels of his life, work and hope. Ever placing duty before self, he has lived for his life-work, and it is and will remain his best and most enduring monument.



HRNRY FAWCETT, LL.D., M.P.

HENRY FAWCETT, LL.D., M.P.

T is given to few of us to realise the ambitions of our younger days. Youthful ambition, unchastened by experience, and unweakened by any lack of selfconfidence, is apt to soar high. Among the boyhood of a nation it is by no means an uncommon or unnatural aspiration to wish to enter their country's Parliament, or to rise to the highest post in the Executive, Premier or President as the case may be. But ambition by no means implies ability or even determination, and comparatively few attain the right to a seat in the legislature of their country. Obviously, it requires considerable tenacity of purpose, and the expenditure of a good deal of time and energy, to attain the desired goal, even under ordinary circumstances and with every advantage of physical fitness, education, leisure, and social position. How immeasurably are the difficulties increased when, as in the case of Henry Fawcett, a calamity of irremediable gravity, with tragic suddenness, and at a critical moment, takes away the sight—the most precious and indispensable of the senses—for ever. The story of Fawcett's life, his ambitions, his misfortunes, his dogged determination, and his success in overcoming all obstacles, and rising to a high position in his country's service, is a most absorbing one.

Henry Fawcett first saw the light on 26th August, 1833, at Salisbury. His father, William Fawcett, was a son of the north country, having left Kirkby Lonsdale twenty years before to seek his fortune in London. Eventually he migrated to Salisbury and entered the drapery trade. Things prospered with him, and he started business for himself in 1825. Two years later he married Miss Mary Cooper. Mr. and Mrs. Fawcett had four children—three sons and a daughter. Henry was the second son. Before he was born, Mr. Fawcett had become a man of position, having in 1832, the year of the passing of the Reform Bill, been elected Mayor of Salisbury.

As a child Henry was not precocious—at his lessons at all events—but his curiosity was insatiable. He was taken in due course to a dame school, but he seems to have preferred the life and movement of the streets to the routine and lessons of the schoolroom. When he was about eight years of age he was sent to a school at Alderbury. At first a little pettish and spoiled perhaps, Henry, in the way of youth, soon grew reconciled to his new environment, as evidenced by a youthful diary still extant. He laid there the foundations of his knowledge of Latin and Greek.

In the year 1847, a Mr. Edmondson took over the building formerly known as "Harmony Hall," the scene of Robert Owen's last socialistic experiment, and opened it as a school under the name of Queenwood College. Henry Fawcett, then a lad of fourteen, was the first pupil to arrive. He very soon gave evidence of his intellectual powers, and was elected joint-editor of the Queenwood Chronicle, the school periodical. He took lessons in elocution, and delivered lectures to his more or less appreciative schoolfellows. He had a con-

siderable command of language even then, but it must be admitted that some of it was mere declamation and boyish rhetoric. Fawcett's appearance about this time (1848) has been recalled by some of his classmates. He was tall for his age, loosely built, and rather ungainly in his movements. As a general rule he was more studious than athletic. Instead of joining his comrades in sport or pastime, he would take his books into the fields and read aloud, or, having memorised long passages, would declaim them with what he considered appropriate gestures, to the mystification of the rustics. He afterwards, as will be seen, outgrew this phase of bookishness. It was at Queenwood that his vague aspirations assumed definite shape, and he decided that he would like to become a member of Parliament, an avowal which, he ruefully confesses, was received by his schoolfellows with "roars of laughter."

After spending about a year and a half at Queenwood, young Fawcett was sent to King's College School, where he at first stayed with Dr. Major, early in 1849. His health was not then very robust, as he was growing very rapidly. A Mr. C. B. Clarke, who also attended the school at that time, describes Fawcett as "a very tall boy, with pale whitey-brown hair, who always stood at the bottom of the lower sixth class." It should be explained that a boy's standing in this school was decided by his classical abilities, and the classics were certainly not Fawcett's forte. He left the King's College School at Easter, 1851, but continued to attend the mathematical and classical lectures until the summer of 1852.

At this stage of his son Henry's career, Mr. Fawcett sought the advice of Dr. Hamilton, then Dean of Salisbury. That gentleman, on seeing some of Henry's mathematical

papers, strongly advised his father to send him to Cambridge. This weighty counsel practically shaped Henry's future. His father, after careful consideration -for the expense of a University training was no light matter to a man in his position-decided that Henry must go to Cambridge. Then came the question of fixing upon a college. Peterhouse was eventually chosen, principally because its Fellowships were open to laymen, and young Fawcett saw in a Fellowship a stepping-stone towards the realisation of his ambition -a public career.

Sir Leslie Stephen, in his masterly biography of his lifelong friend, thus vividly summarises his early

impressions of Henry Fawcett:-

"I could point to the precise spot on the banks of the Cam where I noticed a very fall, gaunt figure, swinging along with huge strides upon the towingpath. He was over six feet three inches in height. His chest, I should say, was not very broad in proportion to his height, but he was remarkably large of bone and massive of limb. The face was impressive, though not handsome. The skull was very large; my own head vanished as into a cavern if I accidentally put on his hat. The forehead was lofty though rather retreating, and the brow finely arched. . . . The eyes were full and capable of vivid expression, though not, I think, brilliant in colour. The features were strong. and though not delicately carved, were far from heavy, and gave a general impression of remarkable energy. The mouth long, thin-lipped, and very flexible, had a characteristic, nervous tremor, as of one eager to speak and voluble of discourse. In after years, the expression rather suggested that his inability to see stimulated the desire to gain information through his

other senses. A certain wistfulness was a frequent shade of expression. But a singularly hearty and cordial laugh constantly lighted up the whole face with an expression of most genial and infectious goodhumour."

Fawcett soon earned a reputation for shrewdness, as one of the earliest anecdotes of his 'Varsity days will show. One of the undergraduates at Peterhouse was a youth who, being something of a sportsman, was dubbed the "Captain." This young man challenged Fawcett, whom he evidently considered the usual freshman from the country, to a game of quoits. Now quoits was quite a popular game in Salisbury, and our hero could beat most of the lads of his native town at the game, so he easily vanquished his opponent. The other, a little taken aback, then proposed a game of billiards, at which he rather fancied his skill would enable him to score. The game was for 100 up. The "Captain" contrived to hold the lead until his score stood at 96 to Fawcett's 75. The latter was to play, and the undergraduates, who were looking on, chaffingly making bets on his antagonist. Fawcett accepted all bets, and then coolly resumed the game. To the general surprise he made 25 in a single break, thus winning the game. bets," he remarked to his friend Clarke, "were forced on me; but the odds were really more than ten to one against my making 25 in any position of the balls, though I saw a stroke which I knew that I could make, and which would leave me with a fine game." This incident and his success in winning the game, gave Fawcett a reputation for astuteness, which earned him for a time the nickname of "Old Serpent." This is the only instance in which he gambled, and he frequently spoke very strongly and with contempt on the folly of

those of his acquaintances who indulged in it. He had a fund of common sense, and a power of self-control which, without making him either an ascetic or a puritan, prevented him from falling into many of the errors and indiscretions common amongst his fellows.

Fawcett had in an unusual degree the faculty of making new friends, a power which he retained all his life. His own particular circle at Peterhouse were like himself mathematical rather than reading men, and studied under the tutorship of Mr. W. Hopkins. But our hero was still backward in his knowledge of the classics, a weakness over which he was more or less gently rallied. He took the raillery in good part, however, and was never ashamed to admit his deficiencies as a scholar. Nor was he easily overawed by differences in position. He was an enthusiastic admirer of intellectual eminence, but his naturally frank and unaffected disposition prevented any self-consciousness in his manner. He was equally at home whether conversing with an agricultural labourer or an archbishop. Sir Leslie Stephen has placed on record his surprise at finding Fawcett on one occasion chatting on terms of perfect bonhomie and equality with Tait (afterwards Professor at Edinburgh) who was fresh from his victories at the Tripos. Most undergraduates in those days stood in considerable awe of Senior Wranglers.

While Fawcett's tastes lay rather in the direction of mathematical than of literary studies, he had no wish to confine himself to, or specialise in, mathematics. He looked on the latter as a useful form of intellectual gymnastics. With him the means never overshadowed the end. He wished to obtain a Fellowship by examination, but his ambition would never let him rest there. It would merely mark a stage of his upward climb. He

used to say that he would rather be Senior Wrangler in the worst year than second to Sir Isaac Newton.

In 1853 he became a member of Trinity Hall. From his third year (1854) onwards he was a regular debater at the Union. After some early disappointing efforts he became one of the most prominent and promising of the speakers, who included Mr. (now Sir) John Gorst, Mr. H. M. Butler, later Headmaster of Harrow and Dean of Gloucester, and Mr. W. T. Marriott, afterwards Judge Advocate-General.

The last term of Fawcett's undergraduate course came in 1856. It was whispered that he had a chance of winning even the Senior Wranglership. In the Tripos he was however unusually nervous. He was unable to sleep at night, although he used to run round and round the College quadrangle until he was tired. Eventually he came out seventh. He was ahead of all competitors in his own College, and was duly elected to a Fellowship at Christmas, 1856.

With characteristic foresight and decision Fawcett had already made plans for his future. He had, as we know, early resolved to embark upon the troubled sea of politics, and his efforts to become a practised public speaker were obviously dictated with the same end in view. A political career, however, implied means, and he was a comparatively poor man. His sole income was that derived from his Fellowship—about £250 a year. He made up his mind, therefore, to prepare for entering Parliament, as many other young men have done before and since, by a successful career at the bar. With his strenuous energy, his practical ability, and his business capacity, he had every quality requisite for success as a barrister. He had already entered Lincoln's Inn, and influential friends were prepared to give

him every assistance to gain a footing in the lega profession.

After taking his degree Fawcett had thought of having a brief holiday, but his vacation became an enforced one, and of much longer duration than he had anticipated. It would almost seem as if a great misfortune had cast its shadow before. In the winter of 1856-57 Fawcett wrote to his friend Clarke that something had gone wrong with his sight. He consulted Mr. Critchett, a noted oculist of that period, in the early part of 1857. Mr. Critchett found that his patient's eyes were suffering from "a spraired condition of the ciliary or adjusting muscles, consequent upon over-use." The retina had also become very sensitive to light, but otherwise there was nothing very alarming. The oculist prescribed perfect rest, forbidding Fawcett to try his eyes by reading for twelve months. warning caused some anxiety amongst his friends. The young man himself was apparently not much affected, but there can be little doubt that the enforced inactivity must have been a great trial at the outset of his career, when he was all eagerness to be up and doing. But with distinctive fortitude he concealed his misgivings from his relatives and friends.

During the same year (1857) he arranged to coach a pupil, one Charles Cooke, for a military examination. With his sister and Cooke he went to Paris towards the end of the year, so that the pupil might learn French while reading mathematics with his tutor. Fawcett, still troubled with his eyes, consulted some of the most eminent French oculists. He was, for a time, under the care of Sichel, who said that it was one of the most extraordinary cases he had ever had. He was baffled, and Fawcett returned from Paris with the state

of his eyes unimproved. He had been somewhat out or his element in the French capital, for, debarred from reading, he could not fall back upon his favourite resource of conversation. There were few to whom he could speak in English, and his sturdy British tongue refused to master the niceties of French.

Our hero returned to England, still condemned to enforced idleness. He spent the next few months at his father's house, occasionally writing letters to the newspapers on the topics of the day. Owing partly, no doubt, to his own temperament, and partly to his Cambridge training, he was something of a Stoic. In reality a man of warm and generous disposition, and of strong domestic affections, he repressed his emotions, often with needless severity. It was only on rare occasions and with very intimate friends that he put aside this youthful affectation of hardness, which, as the years rolled on, failed to conceal his really generous and ardent nature. Writing to a friend about this time he said: "I started life as a boy with the ambition some day to enter the House of Commons. Every effort, every endeavour, which I have ever put forth, has had this object in view. I have continually tried and shall, I trust, still try not only honourably to gratify my desire, but to fit myself for such an important trust. And now the realisation of these hopes has become something even more than the gratification of ambition. I feel that I ought to make any sacrifice, to endure any amount of labour, to obtain this position, because every day I become more deeply impressed with the powerful conviction that this is the position in which I could be of the greatest use to my fellowmen, and that I could, in the House of Commons, exert an influence in removing the social evils of our country, and especi-

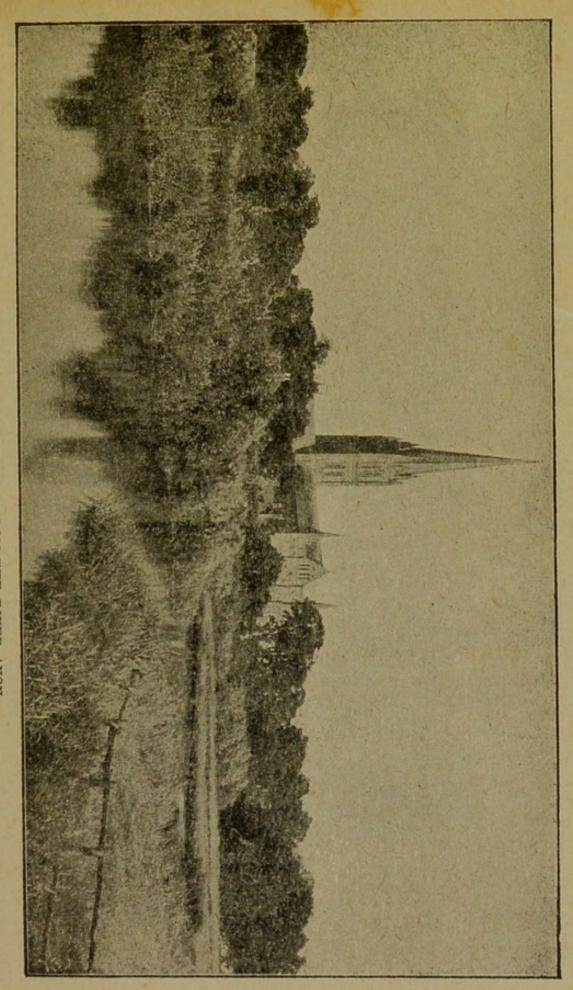
ally the paramount one-the mental degradation of millions."

Such were the outpourings from a youthful heart, imbued with high ideals and a burning desire to set the world to rights. Their manifest sincerity removes any

suspicion of priggishness.

But this ambitious and practical-minded young man did not content himself with aspirations. He could not bear to be idle, and being forbidden to read, he manifested his keen interest in politics and public affairs by visiting Manchester and other industrial centres, and by frequenting the House of Commons. On 22nd February, 1857, he spent twelve hours in the House. "No one," he said then confidently, "need fear obtaining a position in the House of Commons now; for I should say, never was good speaking more required." Thus spoke the confidence and high courage of youth just before the blow fell which would have overshadowed the lives of most men, and have shattered for ever all dreams of a public career.

Overlooking the valley of the Avon, where it runs between the chalk downs, with their rounded contours, and the quiet environs of Salisbury and its beautiful old cathedral, stands Harnham Hill. From its summit, Henry Fawcett used to say, was to be had one of the loveliest views in the south of England. One fine autumn afternoon-the 17th of September, 1858, to be precise, Henry had gone out shooting on Harnham Hill with his father and some friends. The party was crossing a turnip field, when a covey of partridges rose and flew away over some land where the Fawcetts had not shooting rights. In order to prevent the same thing from occurring again, Henry walked on in front



of the party for a distance of about thirty yards. Soon more birds were put up and flew towards him. Mr. Fawcett raised his gun and fired at them while they were in a line with his son. The older man's sight was not of the best, and he had forgotten their relative change of position. Some of the birds were hit, but part of the charge diverged and struck Henry in the face and chest. Most of the pellets, passing through a thick coat, only inflicted slight wounds in the chest. Two of them, however, struck higher and with dire effect. Henry was wearing tinted spectacles to shield his eyes from the glare of the sun. A pellet passed through each of the lenses * of the spectacles, making a tiny round hole in each. The shot, already partly spent, were rendered more so by the impact with the spectacles; otherwise they might have penetrated to the brain and caused instant death. Still, as it was, they passed right through the eyeballs and remained embedded behind them. Henry Fawcett, in the pride of his young manhood, was in a flash irrevocably blinded and condemned to lifelong darkness.

His first thought, as he told his friends afterwards, was one of regret that never again would he see the view from Harnham Hill, never more be able to admire the beauty of the scene bathed in the mellow radiance of an autumn afternoon. He was assisted into a cart and taken to the nearest farmhouse, while doctors were sent for from Salisbury. Henry's sister helped him from the cart when they reached home, and his first words were: "Maria, will you read the newspaper to me?" Such was his consideration for others that he wished to cheer the members of his family by showing his own calmness and courage. He was persuaded to

^{*} The spectacles thus drilled are still in possession of the family.

go to bed and keep as quiet as possible. There was little hope of his sight from the first, but the doctors hesitated to pronounce a final verdict. The patient's general condition was as favourable as could possibly be hoped for. He was in perfect health and suffered

little or no pain.

Some six weeks after the accident Fawcett regained for a time the power of perceiving light, but this last glimmering of sight vanished all too soon, to give place to the Cimmerian gloom which was to last as long as life itself. In June, 1859, his left eye began to waste away, and that was the only time Fawcett suffered severe pain with his eyes. About the end of October Critchett, the oculist, performed an operation, with a view to making an artificial pupil in the remaining eye. He hoped to retain for his patient at least the power of distinguishing between light and darkness, but the retina was too badly injured. His eyes were bandaged for several days. A friend, who was with him constantly, recalls the "terrible anxiety" with which he first tried whether he could see or not, and asked if the sun was shining. The final discovery that there was no longer any grounds for hope, he bore calmly and cheerfully, and without complaint or apparent emotion.

The calamity was overwhelming in its completeness, and desolating in its apparent hopelessness. It affected the father almost as deeply as the son; Henry was the apple of his father's eye. Sir Leslie Stephen, in his biography of Henry Fawcett, writes of the relations between father and son in this wise: "A year or two before (the accident) I had been to Longford, where I had been struck by the eager delight with which the father had spoken of the son's University honours. . . . The relations between the two men were suggestive

rather of affectionate comradeship than of the more ordinary relation, where affection is coloured by deference and partial reserve. The father shared the son's honourable ambition, or rather made it his own. . . . The close union was the more remarkable because neither father nor son could be accused of sentimentalism."

Of a later visit Stephen wrote: "When I visited Longford a few weeks after the accident, I found Fawcett calm and even cheerful, though still an invalid. But the father told me that his own heart was broken, and his appearance confirmed his words. He could not foresee that the son's indomitable spirit would extract advantages even from this cruel catastrophe."

Henry's father is reported to have said: "I could bear it if my son would only complain." But his son's fortitude must, in the long run, have been a great consolation to his father, the unwitting cause of his affliction. One of Henry's favourite quotations probably owes its selection to his feelings at this time. It is taken from the words which Shakespeare put into the mouth of Henry V. in the dark hours before Agincourt:—

"There is some soul of goodness in things evil, Would men observingly distil it out."

Although Fawcett had, throughout this terrible ordeal, the tenderest care and sympathy of his family, and the well-meant but often ill-expressed condolences of his friends, he had to "dree his own weird," and to fight that hardest of all battles—that with himself. In a speech made years later (in 1866) he said that he had made up his mind "in ten minutes" to pursue, as far as possible, the plan of life he had already laid down for himself. But there lay the problem! How was it

possible for a blind man, without fortune or influence to think of entering Parliament? The legal career which he had hoped to adopt and make a steppingstone to public life was, too, apparently out of the

question.

During his convalescence Fawcett lay in a darkened room puzzling out the enigma of his future. Letters of condolence, which, as he told a friend, gave him "more pain than comfort," came in shoals. Many of his friends adopted the conventional tone of counselling resignation, assuming that his life was ruined. But while he recognised the prudence of resignation to the inevitable, he refused to admit, even to himself, that his affliction meant the ruin of all his hopes. Like Nelson he put the telescope to his blind eye and declined to see the signal for retreat. He would have considered it cowardly to turn his back on what he considered his life-work. Consequently he was, like most blind people, more than a little impatient with, and depressed by the pitying tone of many of the letters he received after his accident. At last came one from his old tutor, Mr. Hopkins, which was full of practical counsel, and helped materially to give the young man's mind a more cheerful and hopeful tone. His old tutor recommended him to face the worst, and to modify his studies and plans accordingly. He went on to point out the growing importance of political economy and social science generally. This, and much other sagacious advice, seemed to rouse Fawcett from his first natural despondency, and helped to fire his determination to go on with his life-work in spite of all hindrances.

There was nothing very remarkable in the fact that our hero should, after a time, proceed to make the best of an apparently spoiled and darkened life.

Every blind person must, sooner or later, do that. But that he should at once, deliberately, and of set purpose, decide to carry out the plans by which he hoped to realise his ambition, as if nothing had happened—that was indeed unique. Equipped with all his senses, all his faculties, his task would have been difficult enough, but handicapped by such a serious deprivation, it was one at which all but the stoutest heart would have quailed. He had for a time after becoming blind, even contemplated pursuing his legal career, but in 1860 he gave up any idea of being called to the bar. He never faltered, however, in his determination to enter the House of Commons, poor, unknown, and now blind as he was.

Almost from the very moment when he lost his sight Fawcett, as we have seen, made up his mind to do, as far as in him lay, everything that he had done before. He succeeded in carrying out his resolution so consistently and well that even his friends sometimes forgot that he was blind. He was an optimist, and made no secret of the fact that he wanted to be as happy as possible. He was no ascetic, and never missed an opportunity of innocent recreation or of enjoying the good things of life-quite as much as the more intellectual pastimes. "One of the first things I remember about him," said the lady who afterwards became his wife, "was his saying how keenly he enjoyed life." He was impatient with people who were, or pretended to be, weary of life. "There is only one thing that I ever regret," he would say, "and that is to have missed a chance of enjoyment." His was not, however, any selfish idea of enjoyment. He never fully enjoyed any pleasure unless it was shared by others.

Habitually he cultivated the cheerful side of his nature. For a time after the loss of his sight it required a decided effort of will, but the fits of depression gradually disappeared as he mixed with society. There was, as he told his sister, only one thing that he feared, namely—loss of energy. To his busy mind and active nature, life would become a burden if it no

longer meant action.

He began to provide himself with additional means of enjoyment, setting himself, for example, to improve his taste for music, the art most readily available to the blind, and that in which they need be least dependent on others. He did not himself learn to play on any musical instrument, but his musical taste undoubtedly improved, until he was able really to enjoy a concert or a night at the opera. There was one thing he had to give up. He tried to continue writing with his own hand after losing his sight, but he found it awkward and tedious, and soon resorted to dictation.

As regards outdoor sports and pastimes, he attached almost as much importance to physical exercise after he became blind as he did in his undergraduate days. Having rowed occasionally in the second boat at Trinity Hall during his later residences at Cambridge, he got a crew together three times a week. He had also played cricket and racquets. To a blind man these games were impracticable, but he kept up other forms of exercise most assiduously. He had always been a strong and enthusiastic pedestrian. Not very long after his accident he went out for a walk with his elder brother and a friend. He walked between them and chose a path through the water meadows which necessitated some guidance. Yet we are told

that, on this his first country walk as a blind man, he was the guide rather than the guided.

In later years Henry Fawcett was quite a familiar figure on the roads round about Cambridge. On one of his favourite walks he would pause on the summit of a slight eminence and point out to his friends the distant view of Ely and its Cathedral away beyond King's College Chapel. He often walked down the towing-path to "see" (as he said himself) a boat race, or the crews practising.

When out walking, if in town, Fawcett would take a friend's arm, but once on the straight, country road, he would stride away at a swinging pace which made it difficult for anyone of average physique to keep up with him. His biographer has slyly suggested that it equalised matters somewhat if his companion kept him busy talking, when he would not have sufficient breath left to walk quite so fast. Within the College precincts he, of course, rambled about alone, aided only by the tapping of a stick. In London he could tell at once by the varying sounds and currents of air when he was opposite the opening of a cross street. He liked to have his surroundings described to him as he walked along. He loved most of all, perhaps, the sounds of the countryside: the rustle of the trees, the song of birds, even the leaping of fish on a calm, still eveningfamiliar sounds recalling cherished memories of childhood's days.

In after years he delighted to drive through the country with his sisters and friends, and would stop the carriage at favourite view-points. It seemed as if he appreciated the mental picture he was able to reconstruct from his friends' descriptions, even more than they valued the original view which they could take in

so easily with a casual glance. The walk which he liked best was that along the cliffs from Brighton to Rottingdean. The bracing air, the smooth turf of the chalk downs, and the sound of the sea below, made it to him the most charming walk in England.

Fear was to our hero an unknown sensation. He was a man of iron nerve. From even the earliest days of his blindness he walked boldly and with unfaltering steps. It was characteristic of his splendid fearlessness that he kept up his skating after his accident. In his youth he was a powerful if not a graceful exponent of the art. Leslie Stephen accompanied him to the Serpentine, in Hyde Park, on his first attempt to skate after he became blind. "After a few strokes," wrote his biographer, "the only difficulty was to keep his pace down to mine." They each held one end of a stick, and as the Serpentine was crowded, there were numerous collisions, in which, however, Fawcett's weight enabled the twain to hold their own, more especially as the other parties invariably sympathised with the blind man they had bumped into.

"Some severe winters followed," proceeds Stephen in reminiscent mood, "and I shall not forget the delights of an occasional run beyond Ely on the frozen Cam. I remember how we flew back one evening at some fifteen miles an hour, leaning on a steady northeaster, with the glow of a characteristic Fen sunset crimsoning the west and reflected on the snowy banks; whilst between us and the light a row of Fenmen, following each other like a flight of wild-fowl, sent back the ringing music of their skates. As we got under shelter of the willows above Clayhithe, the ice became treacherous, and we began to remonstrate after a

threatened immersion. 'Go on,' said Fawcett, 'I only got my legs through.'" The others, however, insisted on tramping along the towing-path homewards to their Christmas dinner.

But of all outdoor sports fishing was, without doubt, Fawcett's most absorbing pastime. It was with him a lifelong affection. His father was a keen fisherman, and Henry commenced angling as a boy. His College friend, Clarke, has told how he used to combine his two favourite amusements - angling and conversation. Fawcett would wade into the river, fishing slowly upstream, whilst Clarke would walk along the bank away from the river so as not to throw his shadow upon the water, and then talk away. Trout, the former said, hear very badly, but see remarkably well. Edward Brown, his first secretary after his blindness, also narrates how he used to go with his chief to the river, where, in the intervals of sport, they could retire to an outhouse, drink tea, and read Mill's "Political Economy." Fawcett had resumed the sport very soon after the accident which cost him his sight. He remembered his native Avon with wonderful accuracy, and took a run down to Salisbury whenever he could spare a few hours.

A practised angler named Wright, who accompanied our blind hero on many of his angling excursions, said that he was a remarkably good fisherman. He was more successful, in fact, than many seeing people, perhaps because he was more patient in waiting to strike until he had got a bite. He was especially skilful in catching salmon and trout in the season, and in trolling for pike in winter. He would wade boldly into the water when necessary, and did not hesitate to cross a stream on a narrow plank, though he once got

a "ducking" in this way. He was, too, a remarkably

good judge of the weight and condition of a fish.

While he held that his fondness for fishing required no apology, he sometimes took occasion to remind his friends that it was one of the comparatively few forms

of real relaxation open to a blind man.

Soon after he lost his sight, Fawcett returned to Cambridge, and took rooms in Trinity Hall. The 'Varsity town was his headquarters for a long time afterwards, and he continued to live there for at least part of each year. Some of his undergraduate friends had left Cambridge, but amongst his intimates there were still Leslie Stephen and C. B. Clarke. He rapidly made a large circle of new friends. In fact, within a comparatively short time Fawcett was one of the most familiar figures in Cambridge society. In this great company of bright young men, our hero, one of the most genial of good fellows, soon gained a wide popularity, and was always sure of a hearty welcome. At convivial gatherings his hearty laughter would ring out with infectious hilarity. He vastly preferred Cambridge society to the fitful social intercourse which has long been the only substitute for society in London. In Cambridge, we are told, conversation in the Johnsonian sense was still possible, while in London the formalities and banalities of the social chaos repelled him.

He was one of the best of good comrades. never forgot his friends, and practised that now unfashionable virtue of visiting them when they were ill. He welcomed and encouraged the friendship of younger men, and he always seemed to keep young himself.

While it was both active and powerful, Fawcett's intellect was essentially practical rather than philoso-

phical. He cannot be said to have had pronounced literary tastes, but he enjoyed the reading of good literature, particularly relishing a sonorous passage from Milton or Burke. The poems of Shelley and Wordsworth attracted him, as did Lamb's and De Quincey's essays. Among novels he had read all George Eliot's and many others. With his more serious reading he was, as with all he took in hand, thorough. He had already paid some attention to the study of political economy, and it now became his chief and absorbing interest. His favourite book was Mill's "Political Economy," which he knew from cover to cover. He was a great admirer of John Stuart Mill, who afterwards became his friend. He gave "the dismal science" a practical bent by paying close attention to contemporary politics, and was an avid reader of newspapers.

But the subject of this sketch was not content merely to follow current politics—to be only a looker-on at the game—to lose sight of practice while engaged in the study of theory. He neglected no opportunity of joining in the public discussion of national and economic questions. One of his first appearances in public was at the meeting of the British Association held at Aberdeen in September, 1859, where he attracted great attention by his paper on the "Social and Economic Influence of the New Gold." He also attended the sittings of the Social Science Association at Bradford, and was afterwards prominently connected with both organisations.

It was evident from the practical trend of his activities that Fawcett had by no means given up his ambition to enter political life. His subsequent success makes it difficult to realise how illusory his hopes of

entering Parliament must at first have seemed, even to his friends. Apart from his lack of means and influence, his blindness appeared to be an insuperable obstacle. Mill was one of the few who encouraged him to persevere, pointing out that his loss of sight could only be a disqualification if it had lessened his energy or depressed his zeal.

Fawcett accordingly began to search assiduously for an opening to enter the political arena. He interviewed Lord Stanley (afterwards Earl of Derby), who seemed to think him rather young; and Mr. Bright, who advised him to wait until he was better known. Being young, he was impatient of delay. The death of Admiral Sir Charles Napier in November, 1860, caused a vacancy in Southwark, and our hero decided to become a candidate. He held public meetings, and his vigorous speeches, the interest aroused by his blindness, and the frank good-humour with which he replied to "hecklers," soon attracted large crowds.

The question as to whether or not his blindness would prove a disqualification came under discussion. Fawcett defended himself with gallantry and good temper. Popular sympathy was with him, but time and his lack of influence made the fight a forlorn hope, and he eventually withdrew from the contest. Undaunted by his first failure, however, he held that it

would pave the way to future success.

Meantime, during his years of residence at Cambridge, Henry Fawcett was becoming well known both within and beyond University circles. His speeches at the British and Social Science Associations, and his candidature for Southwark, attracted general attention. Towards the end of 1862 a vacancy occurred in the representation of Cambridge. Fawcett was induced by

his friends to enter the lists as a candidate. There was, however, a good deal of local feeling during the election. and part of his own party abstained from voting, thus

giving the victory to his opponent.

A story is told of Mr. Fawcett being heckled thus: "How will you know, if elected, which is the right lobby to vote in?" Mr. Fawcett replied: "I must rely on the kind help of my friends. But if elected I shall not vote persistently in the wrong lobby, as your late Member did!"

Our hero found some compensation in another direction. He was, as has been said, already becoming known as an authority on economic principles. Amongst his friends of those days was Mr. Alexander Macmillan, the publisher, then of Cambridge. Mr. Macmillan was one of the first to suggest that Fawcett should write a popular manual of political economy. The latter at once fell in with the idea, the book was begun in 1861, and was published in 1863 with results satisfactory to both author and publisher. The volume greatly enhanced Fawcett's reputation, and served materially to strengthen his candidature for the Professorship of Political Economy, which fell vacant about this time.

His candidature was supported by references from many experts in political economy, and the fact of his being a resident at Cambridge was undoubtedly in his favour. But once more his affliction told against him. It was doubted in some quarters if a blind man could preserve order in his classes. His political views, too, found numerous critics. Notwithstanding this double handicap, however, Fawcett's personal reputation was such that at the election, which took place on 27th November, 1863, he was duly elected to the vacant chair of Political Economy.

Soon after this, an opening occurred in the representation of Brighton. Fawcett came forward as a candidate, but there were no fewer than three other Libera aspirants in the field. A selection committee, anticipating the verdict of the constituency, expressed the fear that Fawcett's blindness "would be some drawback to his usefulness." The meeting at which the report was read was a most uproarious one, but the blind candidate not only secured a hearing, but won one of the most dramatic oratorical triumphs of his career. He began amidst great interruption, but the huge audience soon listened with breathless attention.

"You do not know me now," said Fawcett, "but you shall know me in the course of a few minutes." And then he told them the story of his accident, which was listened to with sympathetic attention. He told them how he had been blinded by two shots "from a companion's gun"; how the lovely landscape had been instantly blotted out, and the world was henceforward to him "shrouded in impenetrable gloom." "It was a blow to a man," he said simply, but in ten minutes he had resolved to face the future bravely. He wanted, not sympathy, but to be treated as an equal. It was the first time that he had spoken of his accident in public, except to his fellow-blind. His frankness secured the sympathy and support of the majority of the audience, and he followed up his initial success with characteristic energy and determination. He was ably seconded by his friends, who even launched a newspaper devoted to his interests. It was called the Brighton Election Reporter, and Sir (then Mr.) Leslie Stephen acted as editor. Amidst much excitement the election took place on 15th February, 1864. But the Liberal split made victory impossible. Our hero

came in second, but he had made such a gallant stand, that it was inevitable that he should be the accepted candidate of his party at the next election. His perseverance before long met with its fitting reward. He was elected member for Brighton at the General Election of 1865, thus achieving one of the objects of his ambition and entering the British House of Commons at the age of thirty-two.

Shortly before this event Fawcett had been engaged in some mining speculations which turned out well. He was urged to give up his idea of entering Parliament, or at least to devote some of his time and energy to business. "No," was his reply, "I am convinced that the duties of a member of the House of Commons are so multifarious, the questions brought before him so complicated and difficult, that if he fully discharges his duty, he requires almost a lifetime of study." He may have considered politics as a profession, but such was his conscientiousness and high sense of duty that he invariably placed the public weal before his own private interest. After entering Parliament he was asked to become a director of a company, but he refused. He felt that however consonant with integrity, the holding of such positions must tend to throw doubt on the purity of the holder's motives, especially if he be a poor man.

From this time forward Fawcett not infrequently came into contact with his fellow-sufferers, the blind. In addressing any gathering of sightless people, he never tired of laying down for the guidance of his afflicted brethren the rule which was his own guiding principle—namely, to let blindness interfere as little as possible with the course of life, either in work or pleasure. Yet, strange to say, he was, from the first

time he addressed such an audience, nervous in speaking to an assembly of blind people. He hesitated to quote his own case, for fear of being thought to be appealing for sympathy, or on the other hand, boasting of his own courage. He was reluctant to accept any concession made on account of his affliction, and always gallantly made the best of it. The tenour of his advice to his fellow-blind was: "Do what you can to act as though you were not blind; be of good courage and help yourselves;" and his advice to the seeing was: "Do not patronise; treat us without reference to our misfortune; and, above all, help us to be independent." Nothing, he said, was so hard to bear as to hear people assume a pitying tone or a patronising air towards the blind.

In the autumn of 1866, Henry Fawcett became engaged to Miss Millicent Garrett, daughter of Mr. Newson Garrett of Aldeburgh, Suffolk. At Christmas in the same year he resigned his Fellowship, which, under the old regulations, he would have had to do on his marriage. He subsequently offered himself for re-election under the new regulations, which enabled him to retain the Fellowship so long as he remained a Professor, and he was duly re-elected.

His engagement to Miss Garrett was not a long one, and the following April saw the young couple happily married. Anyone who has followed Mrs. Fawcett's career during her husband's lifetime and since his death, will know that she was fully qualified to take an active interest in her husband's life-work. They were joint authors of a volume of lectures and essays, which, as Sir Leslie Stephen wrote, "implied the agreement of independent minds, not the relation of teacher and disciple," Further, he said, "Those who

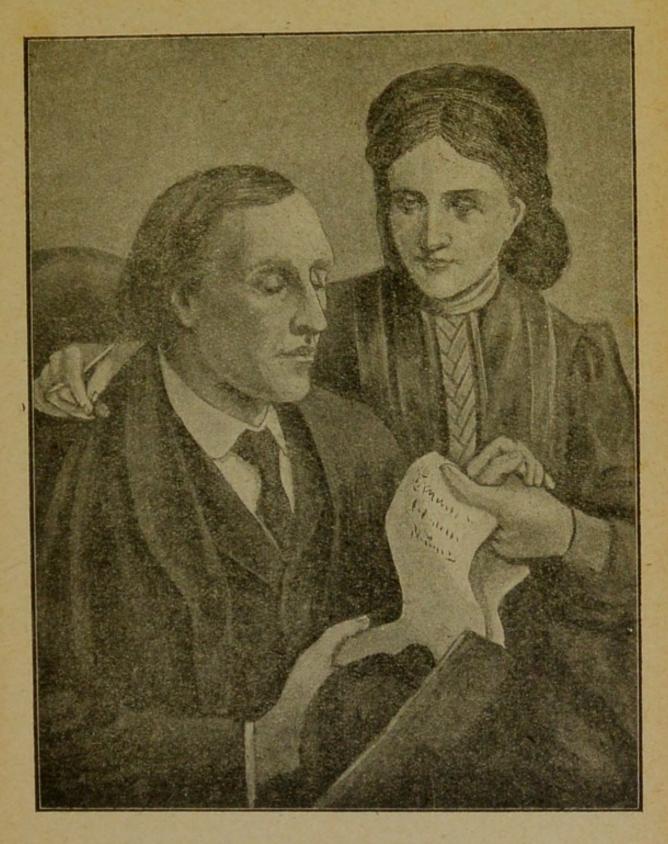
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have the best means of judging are convinced that his marriage was a main source of the happiness and success of his later career." The husband himself said with manifest sincerity, that he had "a helpmate whose political judgment was much less frequently at fault than my own."

When he entered Parliament, Fawcett did not fall into the mistakes made by some young members who become audacious or dogmatic. He fully realised the danger of speaking too much, and of dealing with subjects on which he could not speak with full knowledge and authority. Accordingly, during his first Parliament (1865-68), he played a thinking rather than a speaking part.

Politically speaking, the period was one of change and unrest. During the year 1865 the two great antagonists, Cobden and Palmerston, both joined the great majority. In the same year John Stuart Mill was elected member for Westminster. Fawcett made his maiden speech in March, 1866, in connection with the modest Reform Bill, introduced by Lord John Russell, which was defeated owing to the famous defection of the "Cave." Fawcett's effort was a distinct success. Confidence in the working-classes was its keynote.

While he was an ardent admirer of the sincerity and zeal shown by Mr. Gladstone, whom he called "the great leader of the people of England," Fawcett found himself more than once compelled to act independently. In the following session (1867) Disraeli brought in his Reform Bill, introducing household suffrage. Gladstone and Bright expressed themselves in favour of some limitation of the franchise. Our hero was one of the forty-eight Radicals who had the courage of their



HENRY FAWCETT AND HIS WIFE

convictions, and held a meeting of protest in the tearoom of the House of Commons, achieving a fleeting fame as the "Tea-room Party." Of the deputation of five who waited upon Mr. Gladstone, Fawcett was one. The remonstrance of the Tea-room Party had the desired effect. The Reform Bill was not opposed by the Liberal Party.

The standing and reputation of Fawcett in the House was by this time rapidly improving. It was beginning to be realised that here was a man whose utterances carried weight and conviction. He had already given proof of his versatility, and the power of his advocacy. He had dealt with, among other subjects, electoral reform, popular education, University endowments, various financial questions, and also with India.

Education in particular was rapidly becoming a question of urgent public importance. The first phase of the problem to which he devoted his attention was one on which he was entitled to speak as an expert, and that was the question of religious tests at Universities. He was, it appears, in favour of the abolition of any religious test which would exclude any member of any sect from the Universities, which he looked upon as the keystones of the arch of a national system of education. This matter occupied a good deal of his attention during the three following sessions, and his views met with increasing acceptance.

In the General Election of 1868, our hero, after a sharp contest, was re-elected member for Brighton. He was always an advocate of any system of promotion by merit, and in this matter, like most reformers, he was just a little in advance of his time. In 1869 he

moved that appointments on the civil and diplomatic services should be thrown open to competition and awarded by merit. His resolution was officially opposed as being too drastic, although the Government had under consideration a measure identical in principle. He was opposed to jobbery in any shape or form, and condemned some of the pensions awarded to past holders of great political offices as often unearned and unnecessary.

The year 1870 was memorable for the great controversy on compulsory elementary education which preceded and culminated in the passing of the Bill for Elementary Education. Fawcett was profoundly interested in the whole question. He had, from the time when he first began to take an interest in public questions, strongly advocated some such movement in the direction of founding a national system of education. His ideal was a complete and graduated national system of education, leading from the elementary school to the University. - He was an educationalist first and last. Opposed to free education, which would, he contended, tend to diminish parental responsibility, and would operate unfairly against voluntary schools, he was strongly in favour of compulsory education, and denounced the principle of "permissive compulsion" embodied in Mr. Forster's Act of 1870. Eventually the Bill became law, and Fawcett admitted that it marked a distinct advance. He laboured for several years to have its provisions extended to children employed in agriculture, for whom he had already secured better working conditions under the Factory Acts. It was not until the passing of Mr. Mundella's Bill in 1880, that the School Board system was made universal and compulsory. Happily our hero lived to see the success of a

system of which he was one of the earliest and most ardent protagonists.

Unusually tenacious of purpose, Fawcett still doggedly adhered to his resolution not to allow his blindness to interfere either with his work or with his recreation. In the summer of 1872 he spent a holiday in Switzerland, and climbed to the Cima di Jazzi, a well-known view-point commanding a magnificent panorama of snow-clad mountains.

Nor did he permit the many and varied interests of his political career or of his private life to absorb all his time and attention. He still had more than a passing thought to spare for those afflicted like himself. From its inception he took an active interest in the Normal College for the Blind at Norwood, founded by Dr. F. J. Campbell. In an appeal made on behalf of that institution in 1875, Fawcett remarked that the greatest of all services to the blind was to enable them to earn their own living, and that the Normal College was established with that especial object. While realising the necessity of such institutions for training the young, he protested against the "walling up" of the aged blind in such places. "Home associations," he said, "are to us as precious as to you. I know from my own experience that the happiest moments in my life are when I am in companionship with some friend who will forget that I have lost my eyesight, who will talk to me as if I could see, who will describe to me the persons I meet, a beautiful sunset, or scenes of great beauty through which we may be passing. . . . Depend upon it, you have the power of rendering invaluable services to the blind. Read to them, talk to them, walk with them, and treat them in your conversation just in the same way as if you were in the companionship of one who was seeing."

At the General Election of 1874, Fawcett shared the fate of a good many sitting Liberal members in losing his seat. His defeat was regretted by his many friends at Brighton and elsewhere. Before long the representation of Hackney fell vacant, and he was selected as Liberal candidate and triumphantly elected. In the same year he removed to Lambeth, within easy walking distance of the Houses of Parliament.

From the opening of the first session of his second Parliament, the member for Hackney took a prominent part in the agitation for the preservation of commons and open spaces. He pointed out that the enclosure of village commons left the agricultural labourer without pasture for a single cow, or a playground for his children. He strenuously opposed, too, the appropriation of such admirable breathing spaces for the jaded Londoner as Epping Forest. In short, he set himself to prove that the annual approval by Parliament of the proceedings of the Enclosure Commissioners was no mere matter of form, and that the public interest necessitated the closest investigation. In Fawcett, at all events, the public weal found a vigilant and untiring guardian, and in this particular matter of the preservation of the commons, once so marked a feature of the English land system, he retained his interest to the end.

From quite an early period in his Parliamentary career, Henry Fawcett devoted a great part of his time to the study and discussion of Indian questions. It would be difficult to trace the genesis of his interest in Indian affairs. Several of his friends, including John Stuart Mill, were connected with the Indian Civil Service, and this doubtless directed his attention to our great Eastern dependency. By degrees he began to make his voice heard on Indian affairs, always on the

side of fair play to the natives of India. Fawcett did a great work in arousing the interest of the British people in the affairs of our Indian Empire. It was in thus awakening the sympathies of the predominant partner for the subject race that he earned his sobriquet of "Member for India," and not in any special legislative reforms or achievements. He secured that the Indian Budget should be brought forward earlier in the session. As a member of the Committee appointed to inquire into the financial administration of India he considerably enhanced his reputation. His cross-examination of witnesses—characterised as it was by the tenacity with which he stuck to his points, and the lucidity of mind and grasp of detail which he displayed in discussing complicated financial questions even with experts-was masterly.

Fawcett soon came to have many English correspondents in India, among whom were members of the Civil Service, and also other official personages. He was the recipient of numerous addresses voted to him by the Hindu native associations, and was invariably kind to Hindus visiting England. When he was defeated at Brighton, a fund was raised in India to defray the expenses of another contest. The money arrived too late, but was put in the hands of trustees, and was placed by them towards the defrayal of the expenses of a subsequent election. It is hardly necessary to emphasise the fact that our hero was always scrupulously careful to avoid even the faintest grounds for suspicion of being actuated by pecuniary motives.

In the direction of shaping Indian policy Fawcett played no small part during his political career. He brought to the consideration of Indian affairs just the

same rare qualities of a sane and sound judgment and a fearless courage, which characterised him throughout his life. He was a keen but not a merciless critic of cut-and-dried officialism. His criticism was dictated always by a love of truth and justice, and even those whom he criticised, admitted and admired the loftiness of his aims and the purity of his motives. In 1880 Lord Hartington offered him a seat in the Indian Council, but he preferred to remain an independent member.

Towards the close of the Parliament of 1874-80, Fawcett had become more of an orthodox member of the Liberal party. He had not modified his opinions or his adherence to principle, but on many of the most burning questions of the hour he was at one with his party. Notwithstanding this independent attitude, or perhaps because of it, and also for his integrity, good sense, and personal charm, Fawcett was making friends in all parties. His general popularity was growing apace

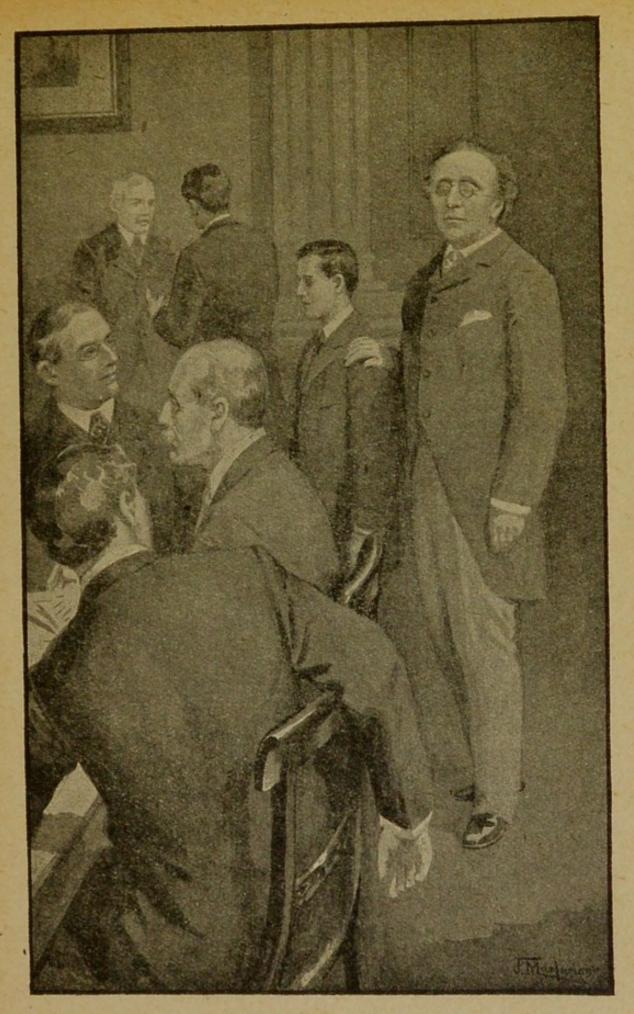
Amidst all the cares and anxieties of his public and private life, Fawcett still retained his fondness for outdoor sports and pastimes in general, and angling and skating in particular. He found it increasingly necessary to have some recreation sufficiently absorbing to distract his thoughts from more weighty affairs. Blind people are especially in need of some such form of relaxation. They cannot readily amuse themselves with light reading, or games, such as cricket, tennis, or even billiards. The same deprivation which saves them from the distractions of things seen, encourages a concentration and persistence of thought, and sometimes a morbid tendency to brooding and introspection which makes recreation all the more necessary.

Fawcett found conversation with congenial spirits perhaps the most delightful form of recreation, but the physical side of him craved for an open-air pursuit and an intimate contact with primitive nature, and this want fishing went far to fulfil.

As has been said, Fawcett was a born angler, and after he became blind he followed the sport with unabated zest. His letters to his father even in the later years of his life contained frequent references to past and future fishing expeditions. Friends round Salisbury and elsewhere offered Fawcett facilities for fishing, which he was always glad to accept. Thus Lord Normanton offered him salmon-fishing on the Avon at Ibbesley, and Lords Nelson and Pembroke troutfishing nearer Salisbury. In the summer he often visited Scotland, where he was made free of the salmon-fishing by his friend, Mr. Bass, at Glen Tulchan, on the Spey. The late Duke of Roxburghe, too, often gave him fishing on the Tweed at Kelso.

Next to angling in Fawcett's regards as an outdoor pastime, came skating. He kept it up whenever the ice offered and his numerous engagements permitted, nearly all through his life. He declared, about the year 1880, that no one enjoyed a skating run of fifty or sixty miles during the last frost more than he. Latterly he insisted on his whole household accompanying him on his skating expeditions to the Fens. Usually he skated alone, skimming fearlessly along, guided only by the voices of his wife or daughter.

It is a matter of history that, in 1880, the Liberal party secured a majority in the General Election. Fawcett was re-elected for Hackney in decisive fashion. His standing in Parliament and in his party was now generally considered to be sufficiently high to warrant



HENRY FAWCETT AS ONE OF THE "TEA-ROOM PARTY" [See p. 132

his holding a place in the Ministry, then in process of being formed. Mr. Gladstone wrote, offering him the responsible post of Postmaster-General. This did not, however, presumably on account of his blindness, include a seat in the Cabinet. After careful consideration Fawcett accepted the position. He had been a little afraid that his affliction would have been allowed to exclude him from office altogether. He wrote to his parents on 28th April, 1880, announcing his appointment.

"My DEAR FATHER AND MOTHER,—You will, I know, all be delighted to hear that last night I received a most kind letter from Gladstone, offering me the Postmaster-Generalship. It is the office which Lord Hartington held when Gladstone was last in power. I shall be a Privy Councillor, but shall not have a seat in the Cabinet. I believe there was some difficulty raised about my having to confide Cabinet secrets; this objection I think time will remove. I did not telegraph to you the appointment at first, because Gladstone did not wish it to be known until it was formally confirmed by the Queen; but he told me, in my interview this morning, that he was quite sure that the Queen took a kindly interest in my appointment."

On May 4th, in a letter to his sister, he describes his first visit to the office, and tells her how kindly he was introduced by Lord John Manners, his predecessor in office, and how heartily he was welcomed by the permanent officials at the General Post Office.

Fawcett thus succeeded to the important administrative position of Postmaster-General at the age of forty-six. He had had no inside experience of the working of a Government department, but he had sound and practical ideas on business management, and had a

Henry Fawcett

healthy aversion to anything savouring of officialism, bureaucracy, or red tape. He had original ideas as to the scope and functions of the Post Office. Refusing to consider it as a mere revenue-producing machine, he held that it should act as a medium for encouraging family correspondence, expanding trade, facilitating thrift, and even for diffusing knowledge. He was always ready to accept suggestions, and did everything in his power to make the Post Office of real public service.

In his first year of office Fawcett asked for and obtained authority to proceed with the organisation of a Parcel Post service such as already existed on the Continent. Lengthy negotiations with the railway companies followed in 1881, but their terms were prohibitive, and the matter was dropped. following year, however, the Postmaster-General's untiring efforts met with success, the delicate negotiations were triumphantly concluded, and the Parcel Post Act became law in 1882. Another year had almost passed before it could be put into operation.

During the winter of 1882-83 Fawcett had an attack of typhoid, from which he ultimately recovered, but which, viewed in the light of after events, must have been the source of permanent weakness. Mr. Shaw-Lefevre undertook the discharge of his duties, which included part of the preparations for the new Parcel Post. The new service was inaugurated on 1st August, 1883. Mr. and Mrs. Fawcett went down to the office on the first evening, and the former afterwards described the scene to his parents, the extraordinary variety of objects posted, and the "smartly painted red vans." The Parcel Post, while not at first a financial success, has since become a most important part of the postal

service, and its popularity has more than justified the foresight and confidence of the blind man who was

responsible for its introduction into England.

The new Postmaster-General also devoted considerable attention to the lowering of the charges for telegrams. He felt that the existing charges excluded the working classes and small traders from the advantages of telegraphic communication. He was favourably disposed to the adoption of the halfpenny-a-word rate, with a minimum charge of sixpence. But as this would involve, owing to the excessive price paid for the purchase of the telegraphs, an initial loss, there was considerable opposition, and he did not live to see his ideas fully adopted.

It was under Fawcett's regime, too, that there arose the difficult and delicate negotiations with the telephone companies, then developing a comparatively new invention. The Postmaster-General was successful in coming to a working arrangement, which, while safeguarding the State monopoly of telegraphs, was agreeable to the telephone companies—an arrangement which held good

for many years.

Another reform which the new Postmaster-General took up on coming into office, was one which had been devised by his predecessor. This was the introduction of a new system of postal orders, payable at any money order office, and with only a low rate of commission. There was some opposition from bankers, but Fawcett carried the measure through with little alteration. These postal orders for small fixed amounts were an immediate success, and have since become almost indispensable to the community at large.

It has been said that the new chief looked upon those departments of the Post Office, which were intended for

Henry Fawcett

the encouragement of thrift, as some of the most important under his charge. He took a keen interest in the growth of the Post Office Savings Banks, which had been in existence since 1861, and had outgrown the older Trustee Savings Banks. Under his ægis the system of "stamp-slip deposits" was instituted, and he issued a popular pamphlet entitled "Aids to Thrift," of which 1,250,000 were circulated. He was instrumental in simplifying and popularising the system of life insurance and annuities, which had been adopted

by the Post Office in 1865.

With our hero the duties of his office did not comprise simply the day's routine to be more or less perfunctorily discharged. The efficient administration of the important Government department under his charge became the most absorbing interest of his life. He devoted more attention to the details of its working than if it were his own private and personal concern. No details were too minute or too trifling for his consideration. He was not sparing of personal effort, and investigated matters for himself. He had correspondence, minutes, and précis read to him. Not content with merely approving the draft of letters, he had many of them prepared for his own signature. Some of his critics thought he applied himself to routine work which might very well have been left to subordinates, but his painstaking methods enabled him to master the minute and intricate workings of the postal service. Controlling a staff of 90,000 persons he had not a single enemy! Here, as elsewhere, by his geniality, frankness, and consideration he earned the esteem of all with whom he came into contact. He was kindliness personified, and in the unpleasant duty of investigating the cases of misbehaviour, he always tempered justice

with mercy. He was in favour of the employment of women, and increased the number of women employed in the various departments of the Post Office.

By the success of his administration of this great public department, the Post Office, Fawcett proved not only that his blindness did not disqualify him for such a position, but that he was unusually well fitted for discharging its most important duties. His career as Postmaster-General, short as it was—it extended only to four and a half years—added greatly to his reputation as an administrator, and enhanced his popularity as a public man. He improved the prestige of his department, and gained general favour by convincing the public that he was in earnest in his desire to serve them, and without stifling private enterprise, to make the Post Office of the utmost practical utility.

About this time the University of Oxford conferred upon Henry Fawcett the degree of Doctor of Civil Law, and in 1883 he was made LL.D., and elected Lord

Rector of Glasgow University.

Contrasted with the turmoil and strife of the political arena, Fawcett's private life was peaceful and happy. He had the greatest faith in his wife's sagacity and judgment, and sought her advice in the most weighty matters. The domestic circle included his only daughter Philippa, who was born in 1868. Wherever he was, there was always talk and happy laughter, and never reserve or restraint. He retained to the end his genius for friendship, and although he was continually making new friends he never forgot the old ones. Nor even in this direction was his affliction any hindrance. A friend's voice was never forgotten The substantial improvement in his financial position caused by his

Henry Fawcett

official salary made little difference in the Fawcetts' mode of living. The fond husband and father gave himself the pleasure of buying more presents for the members of his family, but beyond this there was no

change.

After the illness of 1882 Fawcett, to his regret, found that his walking powers had declined. He began to take more regular horseback exercise and spoke with delight of gallops along the roadside turf near Cambridge. He dearly loved, too, a gallop over Newmarket Heath, where there was plenty of space. Occasionally he encountered the harriers, and would then, as one eyewitness said, "join in our gallops, trusting implicitly to the sagacity of his horse to select the most favourable gap in our stunted hedgerows."

His love of the open air and of the beautiful in Nature only failed with life itself. In what was fated to be the last autumn of his life he went to "see" Clarendon Woods, for, as he said, he understood "the

autumn tints were especially fine that year."

Fawcett retained to the last his interest in the welfare of his fellow-blind. He spoke in March, 1884, of the services rendered by Dr. Campbell, the blind Principal of the Royal Normal College, who possessed, he said, a genuis for organising the best methods of educating the sightless. Fawcett begged his hearers to help to "replace the depressing misery of dependence by the buoyant activity which comes from self-reliance, and from the consciousness of the power to earn one's own living."

Throughout the summer of 1884 Fawcett was prevented by the pressure of public business from taking a proper holiday. He returned to Cambridge, where he was due to lecture at the end of September, paying

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frequent visits to London. Parliament assembled in October. Towards the end of the month he caught a cold. Notwithstanding this he went out driving on November 1st. Next day, feeling ill, he stayed in bed.



TABLET IN WESTMINSTER ABBEY ERECTED TO HENRY FAWCETT

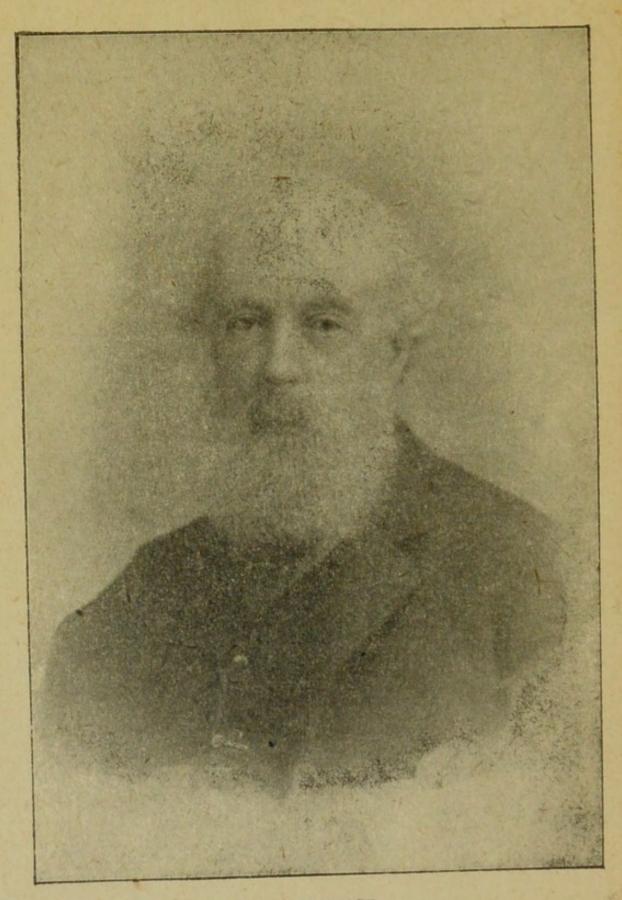
Congestion of the lungs and pleurisy supervened. A terribly anxious and harassing time followed for his relatives and friends. But despite his fine physique, Fawcett was not able to stand the strain. The heart's action weakened, and at 5.30 P.M., on the 6th of

Henry Fawcett

November, 1884, this great and good man passed

peacefully away.

He was buried in the churchyard of Trumpington, near Cambridge, as it was thought unwise to agitate his aged parents, who survived him, by having the funeral at Salisbury. His untimely death, cutting short as it did an eminently useful career, was universally regretted. The funeral was attended by his official colleagues, the chief authorities of his University of Cambridge, and by representatives of his College, of Glasgow University, of his two former constituencies, Brighton and Hackney, and of many other public bodies. His widow received innumerable messages of condolence from all classes and parties. Along with those from the late Queen Victoria and Fawcett's old chief, Mr. Gladstone, she treasures others from humble working-men -eloquent testimony of the fact that the manly heart, now stilled for ever, had in life beaten in unison with the grand common heart of humanity.

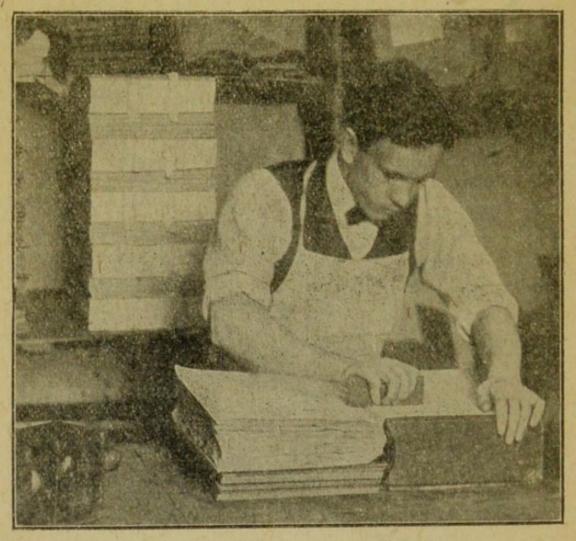


DR. ARMITAGE

DR. ARMITAGE: PRACTICAL PHILANTHROPIST

IT has been said that the supreme test of character is affliction in general, and blindness in particularthat trial by ordeal which brings out any latent capacity to endure or to rise superior to adversity and deprivation. All blind people are not heroes, however. Some of them, with little strength of character, give up, for a time at least, until wiser counsels prevail, all hope and ambition; they are overwhelmed with a flood of self-pity. Others more ambitious and made of sterner stuff, set themselves, as Henry Fawcett did, to overcome or ignore their affliction, and having resolved to reach a certain goal, carve their way to success in their chosen career. Still others, and these are perhaps the highest type of all, having had brought home to them by personal experience the terrible gravity of such a deprivation as loss of sight, think, not of themselves but of others, not of their own future, but of that of their afflicted brethren. Of this last-named class one of the most shining examples of modern times was the late Dr. T. R. Armitage, the well-known philanthropist and benefactor of his kind, through whose heroic labours and self-sacrifice the whole system of educating the blind in England was reformed, and their social condition improved and ameliorated.

A branch of the Armitages, an old Yorkshire family, had come to reside in Sussex; and there, at Tilgate Hall, in the year 1824, was born Thomas Rhodes Armitage, the sixth of seven brothers. Seven years later the family removed to Avranches, in Normandy, and when Thomas was nine years of age they left



A BOOKBINDER AT WORK AT THE BRITISE AND FOREIGN BLIND SOCIETY [See p. 159

Avranches for Frankfort. There shortly afterwards the boy had a severe attack of typhoid fever. The doctors in attendance held out little hope; but owing no doubt to a sound if not robust constitution he in due time recovered. Unfortunately his mother, who nursed him through the fever, contracted it herself and died.

In the year 1834 Mr. Armitage sent his son Thomas and his younger brother to a school at Offenbach, kept by Dr. Becker, the German grammarian. Here the two English boys spent a couple of profitable years, at the end of which time they were able to speak German as well as, or better than English, an accomplishment which Thomas found of great assistance in the noble work of his later life. After returning to England for a short time the Armitages again went back to France, this time to Paris, where Thomas and his brother attended the lectures at the Sorbonne.

Mr. Armitage, about the year 1838, rented one of the Crown Forests of Brittany for shooting purposes, and there Thomas spent many happy days roaming about the woods, absorbed in the study of botany. The love of Nature remained with him all his life.

Then the time came for young Armitage to choose his future vocation in life. He unhesitatingly selected medicine, and accordingly, in the year 1840, as a youth of sixteen, he entered King's College as a medical student. Not only did he devote himself to his studies with unwearying assiduity, but he laid the foundations of that wide acquaintance with English and foreign literature which distinguished him in later years. But the young student's eyes, which had never been very strong, were unable to stand the incessant strain, and at the end of twelve months he was reluctantly compelled to take a prolonged holiday and to give his eyes complete rest. After an interval of two years he was able to resume his studies, and in due course secured his diploma as a surgeon. Later he took his degree of M.D. at London University, and became a member of the Royal College of Physicians.

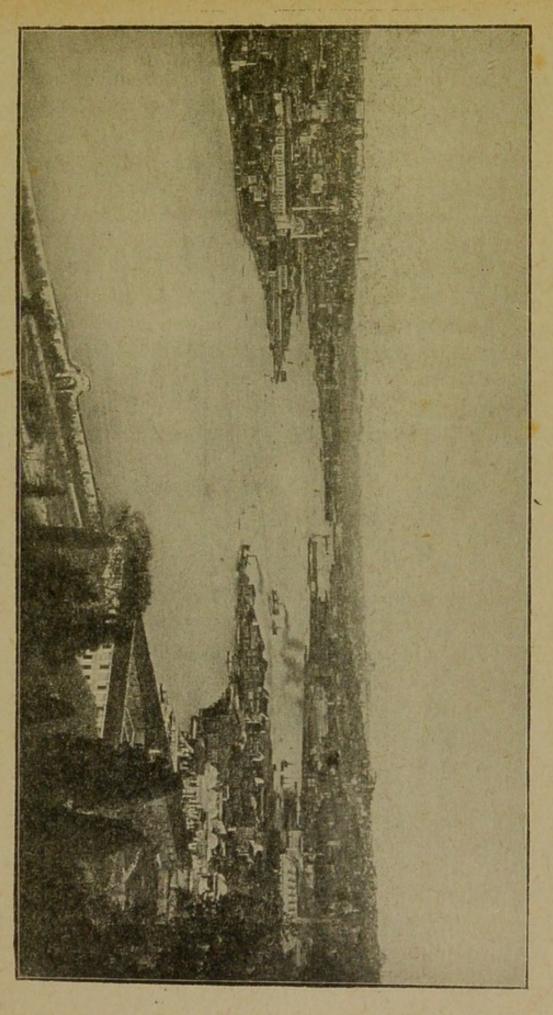
After acting as physician to the Marylebone Dis-

pensary, young Dr. Armitage, about the year 1854, went out to the Crimea as army surgeon, and was on the staff of the base hospital at Renkici. He was a good swimmer, and while at Renkici he swam across the Dardanelles in company with a Dr. Bade.

On his return to London he set up in practice for himself, and for some years he led the busy life of a city doctor, becoming well known as a consulting physician. But the correspondence and other work involved in a growing practice began to tell more than ever upon his eyes, and the strain again weakened them dangerously.

Consequently, in 1860, in order to save that portion of sight which remained to him, he came to the decision of retiring from the practice of his profession. This momentous step was not taken lightly or without the most careful consideration. It was to Dr. Armitage, then in the prime of life (he was only thirty-six), and in the heyday of his professional career, a severe wrench to abandon what he then considered to be his life-work, and to give up all his long-cherished plans. He did not realise then what we know now, that he was called to another and, if possible, greater work, the amelioration of the condition of the blind.

In other ways Dr. Armitage's deprivation was not so serious as it might have been. Having private means, he was not dependent upon his practice as a means of providing himself with a competence, and so was not condemned, as so many are, to poverty as well as blindness. Then, again, he had not to face the awful affliction of total blindness. By timely precautions the disease which menaced his sight—atrophy of the retina—was to a great extent arrested. An appreciable power of vision was preserved to him, though it was not sufficient to read even the largest print.



A VIEW OF THE DARDANELLES, THE SCENE OF DR. ARMITAGE'S EXPLOIT

About this time Dr. Armitage married Miss Black, the only daughter of Mr. Stanley Black, and this marriage, which turned out to be an ideally happy one, was the chief and abiding consolation of the years which he passed in the shadow of a great affliction. It is in his relations with his family—as husband and father that we see a man in his true light, and Dr. Armitage manifested some of his most lovable and kindly attributes in the domestic circle. The writer has been privileged to utilise some of the personal recollections of Dr. Armitage's daughter, Miss A. S. Armitage. She has written that she looks upon the memory of "the intercourse and companionship with my father, during the early part of my life, as one of my most precious possessions. I could always count on his unfailing sympathy and sound advice; and though so nearly blind himself, he opened my eyes to much of the wonder and beauty of the world of nature."

He was one of those most admirable of fathers who are also companions and teachers to their children. Gleaning from Miss Armitage's recollections again we find: "On looking back it seems to me that one of the most remarkable things about him was the wide range of his interest and knowledge; and as he had such a pleasant way of imparting information, it made him a most delightful companion. He had a great love for all animals-in fact, for all nature; and I remember now with the greatest pleasure his talks and teaching about trees and flowers. Often during our country walks in Ireland he would make us examine the flowers we had picked, to find out to what order they belonged, and more than once, when I have made a mistake, he would say: 'Are you quite sure? Look again!' and I would find his memory had served him better than my eyes."

Dr. Armitage must have had a remarkably retentive memory not only for facts and ideas—he knew by heart and could repeat long passages from the works of Milton, Burns, Schiller, and Goethe—but for form and colour, for his daughter writes:—

"He would often take us, when children, to the National Gallery and teach us how to recognise the characteristics of the different artists. This again from memory, for he could only get quite a dim idea of the picture himself when he went right up to it. When travelling and visiting old buildings and churches it was the same."

So much for Dr. Armitage in his private life—as affectionate husband and father—guide, philosopher, and friend to his children, most gentle and kindly of men, one who did good by stealth.

It was in 1865 that the series of circumstances, which were destined to give a bent to all his future energies and to affect the whole of his later career, reached a culminating point. Years before, Dr. Armitage had become interested in a blind man, who was for some years one of his patients. In 1865, having enlisted the kindly doctor's sympathy and assistance, this man, after considerable difficulty -for the appointment of a blind man to any such position was then considered an innovation of doubtful advisability-secured the post of missionary to his fellow-blind, under the auspices of the Indigent Blind Visiting Society, an organisation which had then been in existence for some thirty years. The experiment of appointing a blind missionary proved a complete success. Dr. Armitage frequently accompanied his former patient on his rounds, and by thus visiting the blind at their own homes, acquired a complete

and thorough knowledge and acquaintance with their condition and requirements.

During the same year (1865) Dr. Armitage himself joined the Committee of the Indigent Blind Visiting Society. He quickly found that apathy and internal dissension amongst the members of the committee were militating against the successful working of an organisation which might have been doing splendid work and incalculable good amongst the blind people of London. These differences of opinion finally resulted in the resignation of almost the whole of the committee, and Dr. Armitage had, practically alone and single-handed, to undertake the task of reorganising the society. Amongst other changes the first blind missionary became secretary, and blind men were thenceforward exclusively appointed as missionaries.

At the time when Dr. Armitage first commenced to visit the blind at their own homes, he found many appalling cases of misery and distress. Then, even more than now, the blind were amongst the poorest of the poor, for they were at that time mostly helpless and untrained, having little opportunity of properly learning a trade, and being compelled to become itinerant musicians, and even mendicants. He found many of them in the lowest depths of poverty and despair. His heart was touched, and he began to realise that here, ready to his hand, was a great work, waiting to be done amongst his afflicted fellows.

He was a practical man as well as a philanthropist, and he realised the imperative necessity of making an immediate attempt to supply the pressing material wants of the most deserving amongst the blind. With this end in view, he founded what was called "The Samaritan Fund." The objects of this fund were to

give adequate assistance in cases of temporary sickness, to set up blind people in trade or business, and to render any other help of which they might stand in need. The subscriptions to this fund soon reached an average total of £600 a year, of which, it has since become an open secret, Dr. Armitage himself gave the greater part. He did even more than this. To ensure that the work should be carried on in case of his death so that the blind should not lose the benefits of the fund, this benefactor of his kind generously endowed the fund until his total contributions must have reached the large sum of £17,000. The income derived from this endowment, increased by subscriptions from other sources, has by wise and judicious administration done much to ameliorate the social condition and material welfare of many of the London blind.

As he studied the blind and the conditions under which they lived, Dr. Armitage soon came to the conclusion that the greatest and most fundamental evil from which they suffered was the lack of suitable education and training. He was undoubtedly one of the pioneers in the direction of applying modern methods and ideas to the mental and physical training of the sightless.

There was at that time in the blind schools and institutions in the United Kingdom a lamentable lack of uniformity in the modes of training. The inevitable result was inefficiency. For the most part the managers of these institutions paid little attention to what was being done elsewhere. No attempt was made at coordination or to adopt new and improved methods. On the technical or practical side the result was deplorable. Young blind people left these schools which professed to train them to earn their own living, found them-

selves unable to take up a trade, and as a result drifted into pauperism.

Things were as bad or worse on the educational side. The methods were largely rule of thumb. As to reading, whatever type or system the most influential managers happened to fancy was adopted. Thus in many schools the Roman letter was exclusively used. Ordinary lettering of this type is not well adapted for touch-reading, and the result was a great waste of time; the pupils either failing to learn to read at all or doing so imperfectly. Some schools used abbreviated or shorthand methods which fostered bad spelling. Still others used Moon's type, which, though suitable for the hard handed, makes, for children and those with a fine touch, unnecessarily bulky and expensive volumes.

The supreme objection to all these systems, however, was that they were line systems, and therefore were incapable of being written, as compared with the easily punched dots of which the letters of the Braille alphabet are composed. Grave inconvenience arose from this confusion and want of unity. Some blind children spent years in learning to read a system which was of little use to them in later years. The want of agreement worked harm, too, in another direction. It was impracticable to publish many books, because, whichever alphabet was used, only a limited circulation was possible, confined as it was to those who could read that particular type. The Bible was printed in Moon's and other systems, and parts of it in the Roman letter. Each system had its partisans who would use no other, and the result of this babel amongst the blind was the greatest possible confusion and waste of time and energy.

To remedy all this overlapping and consequent inefficiency, obviously the first step was to obtain reliable

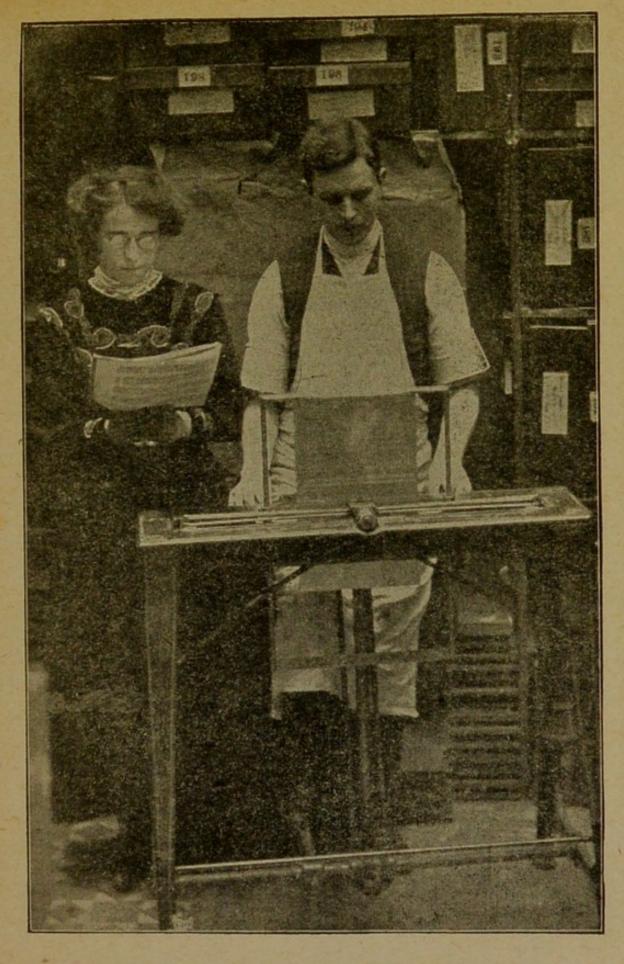
in vogue, not only in England, but in other countries, and then to select that which seemed best adapted to the requirements of the blind. This might be used as a basis, and, if necessary, modified or improved upon. Dr. Armitage himself spent a good deal of time in the Paris Blind Institution, studying the educational methods which obtained there, and he visited others on the Continent and in Canada and the United States.

Most of the mistakes made in the methods of teaching the blind have arisen from their being too much in the hands of the seeing. In this matter of blind type, sighted people, with the best intentions in the world, are too apt to think that letters and signs easily recognisable by sight must also be plain to the touch. Dr. Armitage was keenly alive to the danger of any errors of this nature, and in order to avoid it, sought the co-operation of several blind gentlemen, with sufficient leisure and means at their command to enable them to devote themselves to the work of searching for the best systems of printing and education for the blind.

The energy and enterprise of Dr. Armitage in this direction resulted, in the year 1868, in the formation of the "British and Foreign Blind Association for Promoting the Education and Employment of the Blind." The Council of the Association consisted of gentlemen who were either sightless, or so nearly so as to necessitate the employment of the finger instead of the eye for reading. Those who were entrusted with the examination of the various systems of embossed printing made it their business to acquire a working knowledge of the different methods on whose practical merits they were asked to report.

It very soon became evident that all the line letter alphabets had the common drawback-that they could not be written. Therefore it was clear that, for educational purposes, a point or dot system would have to be adopted. The two best of these were the Braille system, and the modification invented by Dr. Russ of New York. The pros and cons of the two methods were so evenly balanced, and the necessity for careful consideration was so important, that it required nearly two years' investigation before it was possible to come to a decision, which was reached in 1870. In favour of the American variation it was urged that it effected a saving of one-third in space, and that it could be written more rapidly. The original Braille had, however, the advantages of greater simplicity and a larger variety of signs. There were also the considerations that it was already well established in France, and becoming known in other European countries, and that there was in existence a valuable musical literature in Braille. After mature deliberation the Council considered that the balance of evidence as to suitability rested with the Braille system, and the reasons for their decision were fully stated in a pamphlet published at the time. It was a momentous decision, and despite a mistaken movement in favour of the Roman letter, which was opposed by Dr. Armitage, time and experience have proved that it was the right one, and the Braille point system still holds the field in the United Kingdom as in most other countries.

Recognising the superiority of the Braille method over any other for educational purposes, the British and Foreign Blind Association at once set to work to secure the manufacture of frames for writing by the



STEREOTYPING PAGES OF MUSIC AT THE BRITISH AND FOREIGN BLIND SOCIETY

Braille method. The first frames were made for writing on one side of the paper only, but a year or two later the advantages of writing on both sides of the paper became so manifest that the idea was adopted. Dr. Armitage, with characteristic zeal and thoroughness, interested himself deeply in the movement, and it was he who constructed the simple interlining frame—an improvement on the complicated French model-which came into common use among the blind in England. His practical bent also found scope in the perfection of the system of printing in -After patiently experimenting for two or three years, he arrived at the modern method by which movable type is entirely superseded, and all books are printed from stereotyped plates, which are prepared by the blind. Each plate consists of a large sheet of brass folded on itself, and this double plate is embossed on both sides. In printing, the paper is laid between the two halves of the plate, and takes an impression on each side. A simple rearrangement of the bed of the press had to be adopted to make the printing perfect.

In the course of a lecture which Dr. Armitage delivered at the Society of Arts in January, 1870, he pointed out the advantages of the Braille system. He also urged very strongly the absolute necessity of a better musical training for the blind, in order to enable them to maintain themselves by the profession of music. While drawing attention to the fact that at that time some 30 per cent. of the male pupils who had passed through the Paris school for the blind were able to support themselves by teaching music and tuning pianos, he pointed out that, so far as could be ascertained, less than 1 per cent. of the pupils who had received their education at English schools were

able to live by the profession of music. In conclusion, the inference drawn was that, if none of the existing British institutions for the training and education of the blind could be reformed to meet the new and changing conditions in consonance with modern ideas, it might be both necessary and advisable to found a new centre of education for the blind.

It was shortly after the delivery of this lecture that Mr. F. J. Campbell called on Dr. Armitage with a letter of introduction. Mr. Campbell-a sketch of whose career has already been given-was on his return journey to America, after studying music and teaching methods in the German Conservatoires. The story of the happy chance, if chance it was, by which Mr. Campbell was induced to remain in England, has been told elsewhere. Suffice it to say here that Dr. Armitage realised at once that Mr. Campbell was just the man he wanted to undertake the practical carrying out of those ideas in reforming the education of the blind, which both agreed were desirable and practicable. The latter was energetic, and being blind himself, was able to avoid many of the mistakes which are made by seeing teachers in their dealings with the blind. He entered heartily into the project of his English confrère, and consented to stay in England for a time to organise the work, Dr. Armitage finding the necessary funds. As the existing schools and institutions for the blind could not be induced to change or modify their educational methods, it became necessary to establish a new school.

After careful consideration Dr. Armitage decided that it would not be prudent to commence operations until a sum of at least £3000 had been secured. But he was not the man to let such an obstacle stand in

the way of the great work to which he had put his hand. He was benevolent in the best sense of the word, and he gave, not only of his substance and the wealth of which he was fortunately possessed, but also (which is more unusual) generously and wholeheartedly of his time and of his labour. Of the sum mentioned he gave the larger part, and collected most of the remainder from his personal friends.

So it became possible to venture upon the opening of a new school for the blind-new in every sense, new in ideas and modern in methods. The site selected was, as all the world knows now, in the immediate neighbourhood of the Crystal Palace, where the greatest musical advantages could be obtained, together with pure air and pleasant surroundings, at a moderate distance from London. After a probationary period of some two years a better site was secured. Such were the comparatively humble beginnings of the Royal Normal College for the Blind, an institution which, under the early and paternal guidance of Dr. Armitage, and the enterprising superintendence of Dr. Campbell, has pursued a career of uninterrupted success. Dr. Armitage spent his time and money unstintingly in furthering the efficiency and adding to the equipment of the school, and in helping forward the movement; and whenever things came to a standstill for want of funds, he opened his purse-strings ungrudgingly. It would be contrary to the spirit which animated his life to speak of his private benefactions, but there are many besides the pupils whom he paid for to be trained at the College as musicians and piano tuners, who can bear witness to his kindly generosity.

An important bequest of £300,000 was left to the

blind of England and Wales in 1879 by the late Mr. Henry Gardner. Dr. Armitage had frequently urged upon him the desirability of giving this huge sum to the blind during his lifetime, that he might direct its administration and see the good it would do, but Mr. Gardner preferred to leave it in the hands of trustees after his death. The trustees disagreed as to the disposal of the legacy, and a lawsuit followed, judgment being given in 1881. Our indefatigable doctor published a report of the case in Braille, which formed the first number of *Progress*, a magazine for the blind.

In 1886 Dr. Armitage lectured for the second time at the Society of Arts. Referring to his former lecture, delivered in 1871, he said: "The Royal Normal College for the Blind, which was founded soon afterwards, contains now 170 pupils. According to its report, about 80 per cent. of its former pupils are self-supporting." This gratifying contrast with the previous state of affairs showed what a revolution had been wrought in the education of the blind. In the course of the same paper our lecturer advocated the adoption of the Saxon system of lending a helping hand to those workers who had left the institutions. It was an instance of his exceptional foresight that, as a pioneer of the "after-care" system, since so much talked of, he was years ahead of his contemporaries.

When the Royal Commission on the Blind was appointed under the chairmanship of Lord Egerton of Tatton, it was a matter of course that Dr. Armitage should be a member, and the services he rendered on that body were invaluable alike to the community and

to his fellow-blind.

While taking a prominent part in any public movement for the betterment of his beloved blind, he

found time to perform innumerable acts of private benevolence. One of the most typical of these is told by Mr. G. R. Boyle, his devoted secretary for over thirty years. He writes:—

"I remember, during the Royal Commission, a blind man named Alston calling one morning to say that he had a pass on the Great Western to see some relatives in the country. He had not the money to go, and thought his coat was too shabby. The money was given to him, and Dr. A., turning to me, said: 'Do you think my coat will fit Alston?' I replied, 'It will.' And I put it on Alston, to his great delight. Dr. Armitage went upstairs on to a balcony to take club exercise, which he often did. At twelve o'clock I went up and asked him if he remembered that he had to attend the Royal Commission at half-past. Of course he was in his shirt sleeves, as Alston had his coat. He went upstairs to put on his coat, and in a minute or two came down, and I can now, as it were, hear him laughing. When he could speak he told me he had given away his last coat and had not one to go to the Royal Commission with."

That he had a keen and lively sense of humour, his daughter, Miss Armitage, also bears witness. He was a sprightly conversationalist and a genial raconteur, and one story about himself he used to tell with great gusto. It was characteristic of his buoyant and fearless nature that, despite his failing sight, he would traverse the streets of London alone almost up to the last. He enjoyed telling how, on one occasion, he hailed a hearse by mistake for an omnibus, but was suddenly apprised of his mistake by the driver remarking, "Not yet, sir!"

Dr. Armitage was a deeply religious man. His daughter writes of him: "His religion was to him a

living reality, and I should think much more so after he was threatened with blindness; . . . he used to spend many a Sunday afternoon at Norwood seeking to inspire a like devotion and love in the young blind

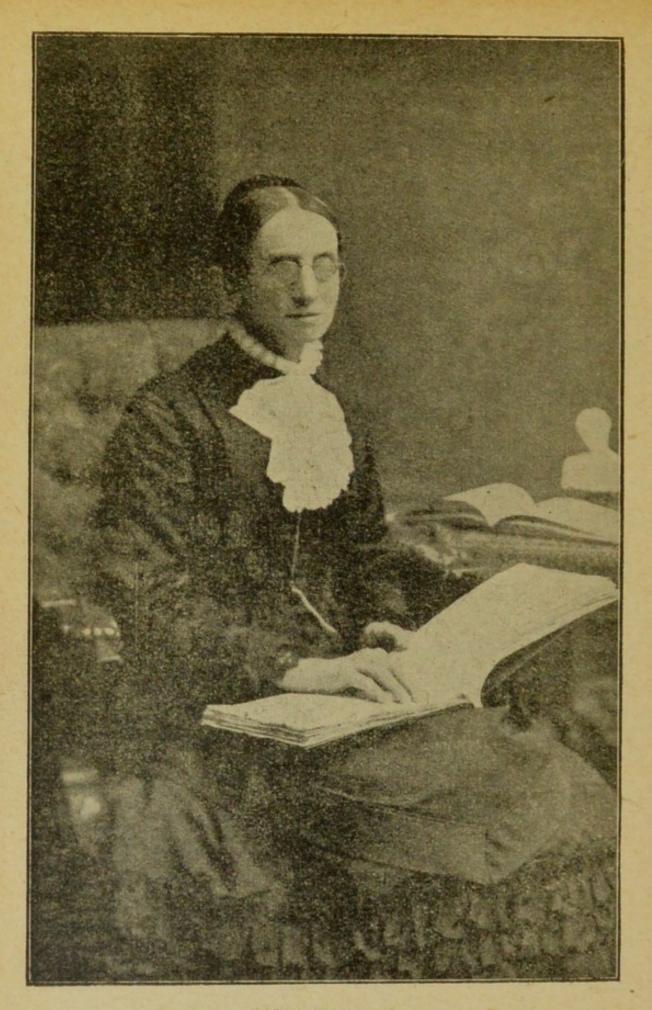
people at the College there."

It was Dr. Armitage's custom to pass the autumn and early winter at Noan, near Thurles, his Irish residence. He was very fond of riding, and was for years one of the keenest followers of the Tipperary foxhounds. One gloomy afternoon in October, 1890, he was out riding—for despite his deficient sight he was a good horseman—when his horse, which had been badly shod, stumbled and fell. The doctor was seriously injured, but some hopes were entertained of his recovery when, early on the morning of the 23rd, he faded quietly into the Great Silence. So passed one of Nature's noblemen.

Dr. Armitage's labours to secure the introduction of the Braille system as the literary medium for reading and writing amongst the blind people of the United Kingdom, his foundation of that international clearing house of the blind, the British and Foreign Blind Association, the prominent part he played in the establishment and equipment of the Royal Normal College, and the furtherance of every movement for the improved training or the social betterment of the blind, all combine to form the crown of a career of heroic and inspiring helpfulness.

He lived and worked for others. That is the message of his life, the message of a great and tender human heart, and an abiding sympathy and compas-

sion for the helpless and afflicted.



LAURA BRIDGMAN

LAURA BRIDGMAN AND HER TEACHERS

PROM time to time, in the history of humanity, there have been born into the world, as we have seen, poor mortals who were fated to undergo perhaps the most terrible affliction that man can endure—the double deprivation of blindness and deafness. In other days such an unfortunate being was looked upon as a help-less burden, or at best an object of compassion, for the amelioration of whose condition nothing could be done. Condemned to darkness, and to live silent and unresponsive in a soundless, colourless world, their lot was indeed a most unhappy one. True, they could be communicated with by signs, but obviously such a code had its limitations, and sufficed for little more than the expression of the most primitive emotions, and the barest physical necessities.

In the early part of the nineteenth century, however, all this was changed. The far-seeing genius and skill of the teacher, Dr. Samuel Gridley Howe, found a ready response from the liberated soul of Laura Bridgman, whose intelligence he succeeded in reaching and awakening to a sense of its power, and who shared with him, as his most brilliant and remarkable pupil, a dual fame. No sketch of Laura Bridgman would be complete without some account of her mentor.

Born in 1801 at Boston, Samuel Gridley Howe, having passed through his university course, studied with a view to a medical career. He never practised in the ordinary way, however, for, first of all, his chivalrous and romantic love of liberty called him, like Byron, to aid the Greeks in their struggle for freedom. On his return to Boston some years later he found his lifework waiting for him. Dr. John D. Fisher, of Boston, had been to Europe and seen the school for the blind founded by Valentin Hauy in Paris. He called a meeting with a view to founding one in Boston, but it was not until the services of Dr. Howe were enlisted that the movement began to promise success. With characteristic energy, Dr. Howe, who took for his motto, "Obstacles are things to be overcome," at once returned to Europe and visited the principal institutions for the blind. When he got back to Massachusetts he gathered a few blind children together, and began to educate them, with a view to showing what could be done in that way, and to impress the public with a sense of the value and necessity of education for the blind. In 1833 large sums were raised for the endowment of the institution, and Mr. Perkins generously presented his mansion for the housing of the inmates. It was not until about the year 1837 that Dr. Howe first heard of Laura Bridgman.

Laura Dewey Bridgman was born on 21st December, 1829, at Hanover, New Hampshire. The third daughter of Daniel Bridgman, a farmer, and his wife Harmony, Laura came of sturdy New England stock, English in origin. She was, however, a puny and rickety child, and until she was half-way through her second year, suffered from convulsions. For the next few months she enjoyed fairly good health. She had

Laura Bridgman and Her Teachers

learned to speak a few words, and was then active and intelligent beyond her years. Shortly after her second birthday Laura and her two sisters contracted scarlet fever. Laura suffered terribly. The organs of both sight and hearing were destroyed, and the senses of smell and taste were blunted and impaired. Her eyes caused her great pain, and she had to be kept in a darkened room for five months. It was twelve months before she could walk without help, and two years before she had recovered sufficiently to sit up all day. At the age of five years she had regained her bodily strength. Her mental powers were, as it transpired, unimpaired, but her lost senses left her mentality imprisoned and in chains, so to speak. Not only had the lost sight, hearing, and, to all intents and purposes, smell, but her sense of taste was so damaged that she could hardly distinguish between different articles of food. She had, too, having lost the sense of hearing, lost also the power of speech.

Laura's only means of communication with her relatives and the outside world was by the sense of touch. She made full use of her one remaining sense, and with childish curiosity felt at everything within her reach. She followed her mother about while she was performing her many household duties, and felt her every motion with her little hands. The instinct of imitation soon developed, and little Laura learned to set the table, and even to sew and knit. The only way of communicating with her was by the simplest of signs. A push meant "Go"; a pull "Come"; a pat on the head expressed approval; on the back, disapproval; raising the hand to the lips as if tipping a cup—drink, and so on.

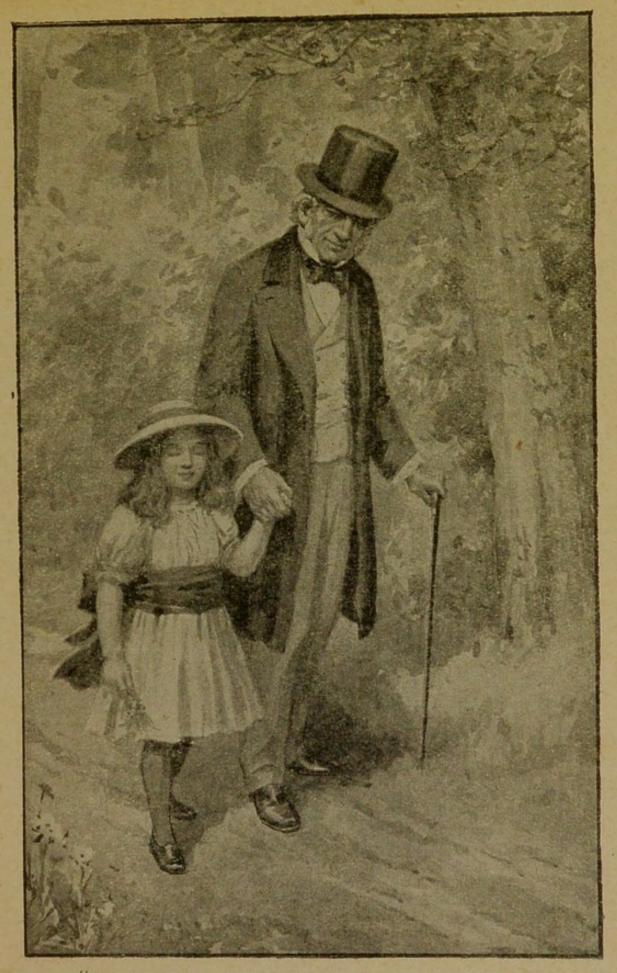
In so far as her consciousness had developed, and

taking into account the fact that to her even her relatives were merely animate and nameless bodies, warm and friendly to the sense of touch, Laura was of an affectionate disposition. To one friend of her childhood she always clung. This was a Mr. Asa Tenney, familiarly known as "Uncle Asa," an eccentric but warm-hearted old bachelor. Hand in hand the old man and the little silent child used to wander through the fields and woods round Hanover, happy and contented in each other's company. Uncle Asa seemed to divine and anticipate her wants, and was always delighted to minister to them. That he succeeded in endearing himself to Laura is proved by her lifelong regard for him.

As Laura grew older her will naturally developed, and she grew more difficult to control. The kindly hand that was to guide her through life came none too soon.

Dr. Howe, with characteristic thoroughness, had turned all his attention to the study of the best and most efficient methods of teaching the blind. The question had frequently arisen as to whether a deafblind mute could be taught an arbitrary, as apart from a sign, language. He had devoted considerable thought to the matter, and when he heard of little Laura Bridgman—although he was quite aware that in the case of Julia Brace, the blind-mute of Hartford, Conn., and in every other case authentically recorded, the attempt had failed—he at once made up his mind to assist the unfortunate child, to make one more attempt to reach an imprisoned human soul, and to place it in communication with its fellow-beings and the world in general.

Dr. Howe went to Hanover to see Laura, travelling part of the way with the poet Longfellow. He wrote afterwards:



"HAND IN HAND THE OLD MAN AND THE LITTLE SILENT CHILD USED TO WANDER"

"I found her with a well-formed figure; a strongly marked nervous-sanguine temperament; a large and beautifully shaped head, and the whole system in healthy action."

He induced her parents to allow her to go to Boston, and accordingly little Laura was taken to the Perkins Institution in October, 1837, she being then just under

eight years of age.

Then came the question of the plan of teaching. There were two methods by which Laura could have been taught to express her thoughts. The first would have been to extend and systematise the natural signs which she already used, and to give her as far as possible a fresh sign for every individual object with which she became familiar. This course would have been comparatively easy, but of only limited utility. The other plan, and the one which it was decided to adopt, was to teach her the letters of the arbitrary language which we ourselves use, and by means of which she would, it was hoped, be able to express her wishes and ideas as they developed.

Allowing Laura a week or two to become accustomed to her new surroundings, Dr. Howe, assisted by Miss Drew, one of the teachers at the institution, proceeded to give the little blind and deaf girl her first lesson.

Dr. Howe thus describes their early efforts:-

"The first experiments were made by taking articles in common use, such as knives, forks, spoons, keys, etc., and pasting upon them labels printed in raised letters.

These she felt very carefully. . . .

"Then small detached labels, with the same words printed upon them, were put into her hands; and she soon observed that they were similar to the ones pasted on the articles. She showed her perception of this

similarity by laying the label 'k-e-y' upon the key, and

the label 's-p-o-o-n' upon the spoon.

"The same process was repeated with all the articles she could handle; and she very easily learned to place proper labels upon them. It was evident, however, that the only intellectual exercise was that of imitation and memory. . . . She repeated the process with only the motive of love of approbation, but apparently without the intellectual perception of any relation between the things.

"After awhile, instead of labels, the individual letters were given to her on detached bits of paper; they were arranged side by side so as to spell 'b-o-o-k,' 'k-e-y,' etc.; then they were mixed up in a heap, and a sign was made to her to arrange them herself so as to express the words book, key, etc., and she did so.

"Hitherto the process had been mechanical. . . . The poor child had sat in mute amazement, and patiently imitated everything her teacher did; but now the truth began to flash upon her; her intellect began to work; she perceived that here was a way by which she could herself make up a sign of anything that was in her own mind, and show it to another mind; and at once her countenance lighted up with a human expression; it was no longer a dog or parrot; it was an immortal spirit eagerly seizing upon a new link of union with other spirits!"

One cannot help admiring the ingenuity of Dr. Howe's methods, his enthusiastic interest in his subject, and above all, his wonderful patience. To establish communication with an immured intelligence like that of Laura Bridgman, enclosed in a living tomb of darkness and silence, was no easy task. The process might be compared to the wireless telegraphy of these latter days, with this most important difference—that with a blind, deaf mute no

mutual code at first existed. Even the method of communication had to be taught. Dr. Howe had to begin at the beginning, and to flash signals across the darkness and the silence to little Laura's wondering, eager, and sensitive brain.

Once having got the germ-idea implanted in her intelligence, Laura's progress was certain, if neither rapid nor easy. In succeeding lessons a logical sequence was followed. The name-label would be given her, and she would search for the article, or the process being reversed, and the article pointed out, she would find the proper label. Then, having mastered the significance of certain words as a whole, a case of metal type was put before her, and she soon learned to compose with the type-letters the words with which she was already familiar. The case of type contained four sets of the alphabet. One set was kept arranged in its proper order, while she used the others. In less than three days she had mastered the proper order, and, incidentally, the alphabet. So that we see that in her case the usual method was reversed. She commenced with word-ideas, and by a process of analysis picked out the different letters of the alphabet.

Nearly two months were allowed to elapse before the next step was taken in Laura Bridgman's education. This was to teach her the manual alphabet and its uses. Her teacher, Miss Drew, learned it from a deaf mute in one afternoon, and the next day set about imparting it to her pupil. She showed Laura the position of the fingers which represented each of the types she had been using. Laura soon acquired the manual alphabet, and was at once eager to learn the name of every object with which she came into contact. Her teacher would spell out the name of the object on

her fingers, and the little girl's face would light up

with pleasure when she grasped a new idea.

"She placed her right hand over mine," wrote Miss Drew, "so she could feel every change of position, and with the greatest anxiety watched for each letter; then she attempted to spell it herself; and as she mastered the word her anxiety changed to delight. . . . She very soon perceived that spelling the words in this way was much more rapid, and attended with much less difficulty than the old method with types, and immediately applied it practically. I shall never forget the first meal taken after she appreciated the use of the finger alphabet. Every article that she touched must have a name. . . . She kept me busy spelling the new words."

From the experience gained in the tuition of Laura Bridgman, it was found possible later, particularly in the case of Oliver Caswell, the blind, deaf, and dumb boy who came to the institution in 1841, to omit several steps in the original "name label" method, and

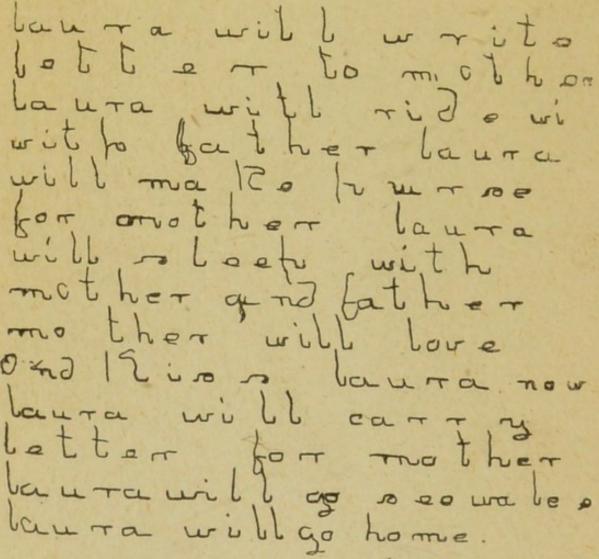
to begin at once with the manual alphabet.

After nouns for names came verbs for actions. The very first were "shut" and "open"; "shut door" and "open door," accompanying the words by the actions. By degrees she was taught most of the verbs in constant use, and then the adjectives. She learned, too, the names of her teachers and companions. Until then each one had been but a nameless and soundless but friendly being, tangible to the touch. Now she could converse with them, could ask questions, and exchange ideas.

In a year or so it was thought necessary to teach Laura to write. At first she was puzzled, but faithfully imitated and repeated every motion, moving her pencil repeatedly so as to form the same letters over and over

12

again. The process was a slow one, and Laura did not learn to write as well or as quickly as some of her blind companions. But as soon as she came to understand that this was another method of conveying her thoughts to others, she was delighted, and applied herself to the task of forming letters and words with



FAC-SIMILE OF LAURA BRIDGMAN'S WRITING

enthusiasm. In a few months she was able to write a letter to her mother—a childish and imperfect one it is true, but still a remarkable accomplishment for a child in her position.

No regular record of Laura Bridgman's lessons was kept until June, 1840, but at the close of the year 1838,

when she had been some sixteen months under training, Dr. Howe published the first of his remarkable annual reports, which afford such a graphic record of the physical, mental, and moral development of his famous

pupil. In this first report he wrote:-

"It has been ascertained beyond the possibility of doubt that she cannot see a ray of light, cannot hear the least sound, and never exercises her sense of smell if she has any. Thus her mind dwells in darkness and stillness, as profound as that of a closed tomb at midnight. Of beautiful sights and sweet sounds and pleasant odours she has no conception; nevertheless, she seems as happy and playful as a bird or a lamb. . . . When left alone she seems very happy if she has her knitting or sewing, and will busy herself for hours; if she has no occupation, she evidently amuses herself by imaginary dialogues, or recalling past impressions."

After commenting upon the rapidity and dexterity with which she and her little blind companions "talked" to one another, Dr. Howe goes on to remark:—

"One such interview is a better refutation of the doctrine that mind is the result of sensation than folios of learned argument."

Some six months after Laura had left home, her mother came to see her. The little girl did not at first know her visitor, but gradually recognised articles of apparel that her mother wore. Then suddenly it dawned upon her that this was indeed her mother, and as she nestled in her arms the scene was a deeply touching one, rendered still more so when the time for parting came.

Laura paid her first visit to her home in Hanover in 1839, accompanied by Miss Drew. Her father met them, and she at once recognised him. She showed Miss Drew all over the house, and inquired the names

of things she had not met with in Boston. Laura was anxious, too, to talk to her mother, and at once set

about teaching her the manual alphabet.

A year later Dr. Howe records his gratification with Laura's intellectual improvement, and the progress she has made in the expression of her ideas. He goes on to describe the ingenious methods adopted to teach her to grasp the meaning of positive qualities such as "hardness" or "softness." She was as yet unable to realise any general expression of quality in the abstract, that is, apart from any particular object. She found the expression of relative position much easier to understand-e.g., "on" or "into"; and those terms expressive of practical action such as sewing, or walking, or running, perhaps easiest of all. Her acquaintance with the construction of sentences was necessarily imperfect. She, naturally enough, put the leading idea first. Thus, in asking for bread or water she would say, "Bread, give Laura;" or, "Water, drink Laura."

The method by which Laura Bridgman acquired language resembled in some degree what must have been the successive stages of the evolution of language amongst primitive peoples. But language not only grows richer and more flexible with use, it is at once a medium of expression, and a direct incentive to the evolution of ideas. In Laura's case the part that language played in her intellectual development was most marked. At first, to her, words were purely objective, and were applied arbitrarily to one particular object. It was quite a long time before she could grasp the idea of words expressing the idea of a group or class of articles, such as books or pictures, substantively the same, but individually different.

Advantage was taken of the opportunity, when

teaching Laura the meaning of such words as "forget" and "remember," to test her memory of her infantile days, before the time of the illness by which she lost all her senses, but she could remember little or nothing.

Laura had a distinct if elfish sense of humour. Sometimes she spelled a word incorrectly on purpose, and with a roguish look, and if she caught her teacher in a mistake, she laughed in her own quaintly merry fashion. With little girls of her own age she was full of fun and frolic, and thoroughly enjoyed a game of romps. She was, too, a true daughter of Eve. She was just as fond of dress and ribbons and finery as other misses of her years. If she was wearing any new article of dress, she always wanted to go out in it, and if she thought her friends had not noticed the particular garment, she would draw their attention by placing their hands upon it.

Dr. Howe conducted some experiments with a view to ascertaining the acuteness of Laura's partially remaining senses. As regarded that of taste she could at once distinguish acidity and acid flavours, but not bitterness.

The one sense that remained unimpaired—touch—was highly developed and extremely sensitive. She could fix the identity of different people with remarkable readiness. There were forty inmates in the female wing of the institution. Laura knew them all, and when walking along the corridors, if the vibration told her someone was approaching her, she stretched out her little arms, and the touch of a hand, or even part of the dress, seemed to suffice to tell her at once who the other person was.

Natural curiosity and the desire for knowledge, when once aroused, kept Laura's fingers, which to her took the place of eyes and ears, continually in motion.

Dr. Howe compared them to the incessantly moving antennæ or feelers of some little insect. When walking with a companion, she not only recognised everything she passed within touching distance, but by continually feeling at her friend's hands, found out what he or she was doing. She had a wonderfully accurate knowledge of the institution, its furniture and its arrangements, and quickly discovered anything new or strange.

Later, she came to know when anyone touched the keys of a piano in the same room with her. She could tell whether Dr. Howe had an old or a new coat on, even if both were of the same texture. Her mentor attributed this to what he called the sense of "muscular resistance." He remarked, too, on her sense of direction, which enabled her to walk with unfaltering footsteps right across a room from point to point, avoiding every obstacle in her course.

Commenting on the development of the moral side of Laura's nature, Dr. Howe remarked on the correctness of her deportment, and neatness, love of order and general propriety. He mentioned, too, the difference of her behaviour with persons of different sex. With little girl companions and grown-up women friends she was most affectionate and demonstrative, but although she was fond of some of her male acquaint-ances, she never, even when only seven years of age, permitted any approach to the most innocent familiarity on the part of the other sex.

Laura was, too, very conscientious, and early acquired a wholesome respect for the property of others. But up to her eleventh year, at all events, according to her famous instructor, "No religious feeling, properly so called, has developed itself; nor is it yet time perhaps

to look for it." He pointed out, however, that she had shown a disposition to respect those who have power and knowledge, and to love those who have goodness. Accordingly, he went on to express the hope that, when the time was ripe, he would be able to undertake the religious part of her education which he had taken upon himself. At this time Laura lived with Dr. Howe and his sister in the apartments reserved for the Director.

Little Miss Bridgman soon commenced to think for herself. Her new teacher, Miss Swift (afterwards her biographer, Mrs. Lamson), who began to give her lessons in June, 1841, told Laura one day that she had only three senses. After considering the matter for awhile she spelled out on her fingers: "I have four!"

"Four what?" asked her teacher.

"Four senses," replied the little girl; "think, and nose, and mouth, and fingers. I have four senses," she insisted, and seemed highly pleased at the discovery.

About this time it was noticed that Laura began to make a peculiar sound when she met anyone she knew, and that the sound was slightly different for each person, for one a chuckle, for another a nasal sound, for another a guttural, and so on. Each one she called that person's "noise," and it was evidently intended as a sign or token for that particular individual.

Laura's curiosity, as has been suggested, was insatiable, and her questions were frequently very pertinent. Her teacher having shown her a pincushion made in the shape of a fish, Laura said, "You must teach me about fish. Why has it not legs?" Again, being told about flies, she asked, "Why do flies fly with wings? Why do they not walk on the floor?" She became quite interested in animals, and on one memorable occasion, having had a ride on

horseback, she wanted to know, "Why do not horses and flies go to bed? Why do horses have iron shoes? I hear horse walk when he kicks off flies, because they are hard." She was referring to the stamping of the horses in the stables.

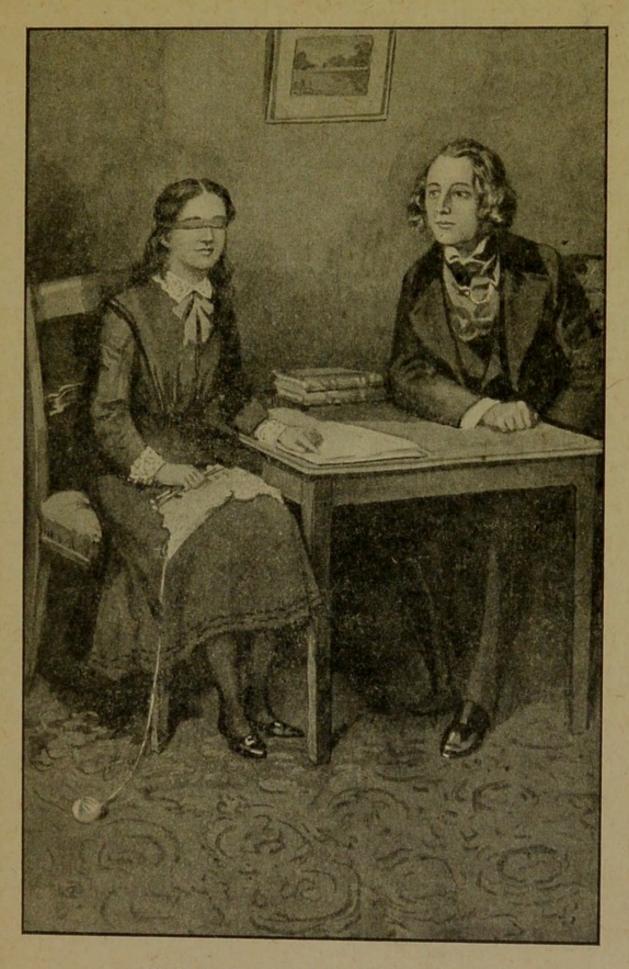
Accompanied by Miss Drew, Laura paid another visit to her parents in October, 1841. Dr. Howe met her in Concord, and the little blind and deaf girl gave a display of her capabilities in the State House before an influential assembly. Laura was already becoming famous, but the knowledge was carefully kept from her, and she was quite unspoiled. She was taken to visit Julia Brace, her fellow-sufferer, at Hartford Asylum, and also Mrs. L. H. Sigourney, the authoress, who wrote a poem on the occasion. At the close of this round of visits, Laura had to part with her first teacher, Miss Drew, to whom she owed so much, and who was leaving the institution to be married.

The year 1842 was memorable to Laura Bridgman, for she was visited by no less a person than Charles Dickens. Miss Swift made the following entry in her journal:—

"29th January.—To-day Laura had the honour of a call from Charles Dickens. His great interest in her caused him to remain for several hours. She was animated in conversation, and I think he received a very correct impression of her."

The great English novelist devotes several pages of his "American Notes" to his impressions of the Perkins Institution and its inmates. He wrote:—

"Like most other public institutions in America of the same class, it stands a mile or two without the town, in a cheerful, healthy spot; and is an airy, spacious, handsome edifice. It is built upon a height commanding the harbour."



CHARLES DICKENS AND LAURA BRIDGMAN

Dickens goes on to describe the personnel and routine, the good order, cleanliness, and comfort of the institution, the camaraderie that prevailed among the afflicted inmates, and yet, behind it all, he was alive to the pathos of their common deprivation. With those keen, observant eyes of his he glimpsed the fleeting expressions of the blind, who, unseeing, dream themselves unseen, and do not dissemble. Most vivid of all, however, was evidently the impression made by the story of the shadowed, silent life of Laura Bridgman. Here are his own words:—

"I sat down in another room before a girl, blind, deaf, and dumb; destitute of smell, and nearly so of taste; before a fair, young creature with every human faculty and hope and power of goodness and affection, enclosed within her delicate frame, and but one outward sense—the sense of touch. There she was, before me; built up, as it were, in a marble cell, impervious to any ray of light, or particle of sound; with her poor white hand peeping through a chink in the wall, beckoning to some good man for help, that an immortal soul might be wakened.

"Long before I looked upon her, the help had come. Her face was radiant with intelligence and pleasure. Her hair, braided by her own hands, was bound about a head whose intellectual capacity and development were beautifully expressed in its graceful outline, and its broad, open brow; her dress, arranged by herself, was a pattern of neatness and simplicity; the work she had knitted lay beside her; her writing-book was on the desk she leaned upon. From the mournful ruin of such bereavement there had slowly risen up this gentle, tender, guileless, grateful-hearted being.

"Like other inmates of that house, she had a green

ribbon bound round her eyelids. A doll she had dressed lay near upon the ground. I took it up, and saw that she had made a green fillet, such as she wore herself, and fastened it about its mimic eyes."

Such is the pathetic pen picture which the famous novelist puts before us, and he goes on to narrate in his own inimitable fashion the moving story of her life.

The death of one of the blind boys in the Perkins Institution grieved and upset Laura very much, for she appears to have had an innate and instinctive fear of death. Dr. Howe seized this opportunity of instilling into Laura's mind some idea of God and of the immortality of the soul; but he was perplexed at the very outset by the unconsciously logical and extremely direct questions of his pupil, whose literal mind confused things spiritual with things material.

It seemed as if the darkness and silence of the physical world, as she knew it, influenced her mentality, and that she was afraid to move forward otherwise than step by step and in a straight line, never accepting a new idea until she had fitted it in with her previous conceptions, lest perchance she might go astray in this strange, intangible, bewildering world of thought. Or, perhaps, it was that Laura's imagination, her power of projecting mental images, developed more slowly than her other mental faculties. This was the opinion of some of her teachers, and her lack of imaginative power was held to have caused her many difficulties in the course of her studies.

However this may have been, Dr. Howe did not find the task of beginning Laura's religious education a simple matter. She wanted to know what the soul was, why it left the body at death, and where it went to? Also, if animals had souls? and if not, why not?

Her instructor tried to explain her spiritual existence as apart from her physical life, but this seemed to trouble Laura very much, and she said, "I do not wish to die." So Dr. Howe thought it best to change the subject.

In his report for the year 1842, Laura being then thirteen years of age, Dr. Howe set out his reasons for not proceeding with his pupil's religious education as quickly as some kind friends would seem to have wished. He wrote:—

"I am aware of the high responsibility of the charge of a soul, and the mother who bore her can hardly feel a deeper interest in Laura's welfare than I do. . . . It is not to be doubted that she could be taught any particular dogma or creed, and be made to give as edifying answers as are recorded of many other wonderful children to questions on spiritual subjects. . . . Unaided by any precedent for this case, one can look only to the book of Nature; and that seems to teach that we should prepare the soul for loving and worshipping God, by developing its powers, and making it acquainted with His wonderful and benevolent works, before we lay down rules of blind obedience."

The system which Dr. Howe followed in directing the education of Laura Bridgman was, at least, characterised by a sane consistency. He did not intend to permit Laura, while under his charge, to be made into a freak or show child. He spared no pains to ensure that her faculties should be allowed to develop on natural lines. Nor did he allow her intellect to be developed at the expense of her nervous and physical system. He was a firm believer in the motto of mens sana in corpore sano. Some physicians who had seen Laura were afraid that her restless activity of mind might affect her health. But Dr. Howe saw to

it that the physical health and well-being of his pupil was safeguarded by calisthenic exercises and long country walks. He thought, too, that as Laura's emotions, although characteristically intense, were almost entirely of a pleasant nature, no harm would accrue. She was naturally of a bright and joyous disposition, but she was at times extremely nervous, and was encouraged to take exercise for its steadying and tonic effect on her nerves.

For some time it had been felt that a careful study of the intellectual development of Laura Bridgman would be of considerable metaphysical and scientific value, and for that reason, that a careful record should be kept of her mental progress and the course of her studies. It was arranged, therefore, that Miss Swift should devote her whole attention to Laura. The desultory manner of teaching hitherto followed gave place to a more systematic curriculum. Laura was quite pleased with the new arrangements, and took up her studies—that of geography, which was new to her, in particular—with zest and avidity.

The first Saturday afternoon of each month was at this time devoted to a public exhibition and concert given by the blind pupils of the institution. Laura was expected to be in the schoolroom for the first hour. The fame of her exploits was widespread, and attracted hundreds of the public. The blind girl found this publicity a trying ordeal, and was usually very nervous.

Miss Swift's method of reading to and teaching her pupil may be briefly described. Seated at Laura's left side, preferably on a couch or sofa, the teacher spelled with her right hand (using the manual alphabet) the letters of each word, with the exception of "and," which of course has its own sign. Laura's right hand would

move lightly over Miss Swift's fingers, so as not to impede their motion, and spell, or rather read, the words. She did not appear to apprehend each letter separately any more than we do in sight-reading. Laura's teachers generally found it necessary to inculcate concentration by pausing occasionally, and asking her to repeat what she had been taught, in order to make sure that she had grasped the subject thoroughly. If this were omitted, the lesson often had to be repeated. She was not allowed to leave the study of a subject until she had mastered it. This discipline of thoroughness and perseverance enabled her, with her own unusual intelligence, to make remarkable progress. Her advancement was all the more praiseworthy, because, destitute of all the aids which sight and hearing give to the intellect and the imagination, winging the mind through the world of knowledge, this poor girl had to grope her way slowly along, alone in a still and sombre world.

Miss Swift, at the Principal's suggestion, tried some experiments in teaching her pupil to speak words vocally. She had, as we know, been in the habit of making peculiar vocal sounds. Some of them happened to resemble the words "ship," "pie," "doctor," and her teacher got Laura to repeat them. She did so, and was quite pleased with her own powers. After much labour she learned to say "pa," and "ma," and "baby."

One day she said, "My mother was wrong to make me deaf." Her teacher told her it was sickness made her so. Laura seemed satisfied, but after reflection she said, "I am very sad that I cannot hear and speak and see." Still, like the innocent child she was, she soon forgot her troubles, and the very next moment she was laughing heartily.

Dr. Howe's marriage to Miss Julia Ward took place in 1843, and Laura manifested great interest in the event. She had, however, some misgivings as to whether she would lose any share of the doctor's affections. Before Dr. Howe and his bride left for their honeymoon in Europe, Laura was taken to visit the steamship in which they were to sai examined the saloon and the tables, and visited the state-rooms and cabins. Lastly, she walked the whole. length of the ship to get an idea of its size. Often during the doctor and his wife's absence in Europe, Laura thought and spoke of her benefactor, and was very sad and thoughtful. She evinced much interest in the birth of his daughter Juliana in 1844, and welcomed Dr. Howe and his wife and child most cordially on their return.

Pursuing his intention of inculcating into Laura's mind the idea of the Deity and His perfect goodness, Dr. Howe found that his pupil could not easily form any idea of goodness or virtue in the abstract. She invariably resorted to the concrete, and the only standard of comparison she could find was the imperfect one of humanity—her own friends and acquaintances. It was this tendency which dictated such questions as, "Why is God never unkind or wrong?"

Dr. Howe was grievously disappointed and discouraged. He attributed the marring of his scheme or plan of religious education for Laura to what he called "the well-meant officiousness of others," in directing her thoughts to things she did not understand before the proper time.

It was soon after this that Miss Swift left the Perkins Institution, and Laura was without any regular instructor from May until August, 1845. Then

another system was adopted, and Miss Sarah Wight took complete charge of her education. Laura was constantly in her company, and did not meet the other blind children, with the exception of two or three girls (chosen by Dr. Howe) who came to her room to play or chat.

During the year 1846, when she was in her seven eenth year, Laura's health began to fail, causing her friends great anxiety. It was possible to keep her in ignorance of the gravity of her condition, for she was unaccustomed to think of sickness and death. However, she chose herself a simple diet of bread and milk, and under a regimen of sea-bathing and horseback exercise, she gradually recovered her wonted good health. She appeared, however, to have grown more grave and serious during her illness, and had imperceptibly changed from a merry and thoughtless child into a thoughtful young woman, bright and cheerful, but with an added air of responsibility.

Of Laura's powers of observation Dr. Howe wrote: "She . . . ascertains the state of mind of those about her by reading parts of the natural language of the emotions, which we never observe, but which are as sure guides to her as the expression of the countenance is to us. . . . Laura not only observes the tones of the finger language, she finds meaning in every posture of the body and in every movement of limb; in the various play of the muscles she observes the gentle pressure of affection, the winning force of persuasion, the firm motion of command, the quick jerk of impatience, the sudden spasm of temper, and many other. variations which she interprets swiftly and correctly." As she grew older she exhibited a remarkably shrewd and sound judgment of character. She could detect and was repelled by mental weakness in others,

but was attracted by gentle, timid natures, which she discovered at once. She knew how different people laughed, and often spoke of the sweet smile of one or another of her acquaintances. On one occasion she met a friend's husband for the first time. He was a worthy and estimable man, but reserved and distant in manner. He simply shook hands with Laura. She remarked afterwards: "Has he many friends? Is he greatly beloved in his own family? Is he severe?"

Miss Wight had been deputed to undertake the continuation of Laura's religious education, but after a time Dr. Howe took it back into his own hands. Laura's character and moral nature had developed and improved during these years, but she still retained her penchant for asking the old and unanswerable questions. "Why did God make us to be sick and suffer pain if He loved us?" she asked one day; and at another time: "How did God tell the first man about Himself?"

Early in the year 1847 the dear old friend of Laura's childhood, "Uncle Asa" Tenney, passed away. Laura was deeply moved, and her efforts to put on mourning for him, her inquiries about his last hours, and her wish to visit his grave, all proved how keenly she felt his loss. It turned her thoughts to the subject of death, as it might affect herself. Later in the year she was taken to Hanover to visit her parents, and was all eagerness to hear the last tidings of Uncle Asa.

Soon afterwards a little girl, totally deaf and partially blind, came to the institution, and as a good deal of her instruction was given by means of the manual alphabet, it was thought that Laura might assist. Accordingly, at the beginning of the year 1848, Laura was allowed to teach the little girl

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for an hour each day. That she took the task seriously may be seen from the reports she herself drew up :—

"19th January.—I instructed Lizzie a lesson from arithmetic with much pleasure. It seemed very funny and queer that I could teach a pupil so successfully."

Laura had long kept a journal with praiseworthy industry, and regularity, and—a more uncommon quality this—sincerity. She set down her faults with no attempt at extenuation, and also her contrition for having done wrong.

Our little blind heroine was never indolent or apathetic; she simply bubbled over with energy. When she went to a friend's house to spend the day, or even a few hours, she would ask her hostess if she could do anything to help her. If there was a baby in the household, she always begged to be allowed to nurse and fondle the child, which she did with the most natural air in the world.

Laura took a real interest in the public questions of the hour. The year 1849 was memorable as that of the terrible famine in Ireland. Large sums of money were raised in America, and Laura was desirous of contributing her mite. She accordingly finished a piece of beautiful embroidery, which was sold, and with the proceeds a barrel of flour was sent across the Atlantic.

In the same year (1849) Dr. Howe writes of Laura at length for the last time. The usual yearly account of the progress of her education had been discontinued as unnecessary, there being no material changes to chronicle. He describes his protégée as being cheerful and even gay at times. He goes on, however, to write of more weighty matters—her religious and moral instruction, to wit:—

"She has not been indoctrinated into any particular form of religious belief. Faith she has in God, aye! and love, too—that love which casteth out fear. Her veneration, which showed itself spontaneously, has been so directed upward to the Creator and Governor of all things, that she lives in consciousness of His protecting presence and loving care. . . . She often says with a joyful and loving look, 'Our Father gives us all these things.'"

Proceeding, he sketches his past methods, the

present results, and his hopes for the future:-

"I wished to avoid the common error of giving a creed first, and the elements out of which faith ought to be formed afterwards, when the form of belief was fixed." Dr. Howe goes on to emphasise the mutual dependence of body and mind, and continues: "My hopes of Laura have been, in some respects, disappointed; but that is clearly because they were unreasonable. Some important considerations were overlooked, such as the hereditary disposition, the deranged constitution, the undue development of the nervous system. The result, however, has been to give an increase of faith amounting to conviction in the efficacy of wise measures for moulding and shaping character."

By this time Laura Bridgman's fame, as the first blind, deaf mute to be successfully educated, had spread practically throughout the civilised world. Dr. Howe voiced the general opinion in 1850 when he wrote:—

"Her progress has been a curious and an interesting spectacle. She has come into human society with a sort of triumphal march; her course has been a perpetual ovation. Thousands have been watching her with eager eyes, and applauding each successful step, while she, all unconscious of their gaze, holding on

holy home. Steaven is holy home Noly home is from EVET lasting to Everlasting. Moly home to Summeriy. 5d hass this bath home to watt a Light bom E. Eurthly hame stale perish. But boly kome shall end. UTE FOT EVET! Earthly home is Wintery. Mart it is for us to opport inte the radiance of holy home because of blind. ness of our minds. Now glorious holy home is a still more than a beam of sun. An the finger of god my eyes a Ears shall be opened. Toke string of my tongue shall be loased. With sweeter joys in

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to the slender thread and feeling her way along, has advanced with faith and courage towards those who awaited her with trembling hope."

The summer holiday of 1850 was spent by Laura and Miss Wight at Hanover. Immediately afterwards Miss Wight resigned her position, on the occasion of her marriage to Mr. Bond, a missionary. During their engagement Mr. Bond used of course to visit Miss Wight. Laura Bridgman was often present, and Mr. Bond was very kind to her. Laura began to fancy that the young missionary came to see her. The incident cannot be better narrated than in the words of Dr. Howe's daughters in their admirable volume on Laura Bridgman,* a tribute to pupil and teacher alike:—

"This child, whose life was guarded from all evil, was not spared the pain of hopeless love and jealousy. The secret of that lonely heart was at last discovered by her more than sister. It seemed best that she should be made to understand that in this thing, too, she was not as others are, that she could never hope to fill the high office of wife and mother. When this was explained to her gently and kindly, her whole face changed, and her trembling fingers spelt out the words, 'Am I not pretty?'

"There is nothing more striking in her whole history than this simple incident. Much of human growth is by pain, and while the thought of the hopeless love that tortured her is infinitely pitiful, one feels that without it she could never have attained the full stature of womanhood."

Laura was really sorry to lose Miss Wight, whom she spoke of as "my best teacher." The finishing of her education was, for a time, entrusted to Miss Paddock.

^{* &}quot;Laura Bridgman: Dr. Howe's Famous Pupil, and What He Taught Her," by Maud Howe and Florence Howe Hall.

This lady and Miss Wight were intimate friends, and before the latter left, they spent a good deal of their time together. Laura was often present, usually busily engaged in knitting purses or making lace edging. Frequently, to her teachers' amazement, she would lay down her work and begin to talk of the person or subject of which they had been speaking. This was the more surprising when it is considered that no clue could have been given to her by word, or act, or sound, and there could be no explanation but that of thought transference. Consequently, the two friends decided not to speak of anything before Laura which they did not wish her to know.

It was not very long before Laura went home to her parents at Hanover. Dr. Howe learned, to his displeasure, that some of her relatives proposed to take her about the country to give exhibitions of her skill, and sell her autobiography. He at once sent Miss Paddock to dissuade the family from any such plan, and to bring Laura back. When this ladyreached the Bridgman homestead, and their scheme was unfolded to her, she said:—

"Oh, I know the doctor would disapprove of any such plan."

"That's enough, then," said Mr. Bridgman; "Dr. Howe has made Laura what she is, and we have no

right to do anything contrary to his judgment."

Besides her meeting with Charles Dickens, Laura met many of the most distinguished men and women of her time and country. At one memorable dinner-party given by Dr. and Mrs. Howe during the winter of 1851-52, in honour of Kossuth, the Hungarian patriot, and his devoted wife, there were also present Longfellow, Lowell, and many other celebrities. Laura was brought into the drawing-room after dinner.

Kossuth conversed with her through the kindly medium of Miss Paddock's fingers.

Laura had a good many books read to her, but she enjoyed none more than Longfellow's poems. The touching idyll of "Evangeline" in particular made a deep and vivid impression on her mind; so much so, that she wrote the poet a letter with her own hand, telling him how much she liked "Evangeline"—a simple epistle which Longfellow valued very highly.

When Laura had reached the age of twenty-three, it was felt that the time had come to decide as to her future. After careful consideration, Dr. Howe and her other friends thought it best that she should return to the bosom of her family, in the old homestead at Hanover. Laura was much attached to her parents and her brothers and sisters, and it was thought that with a share in the household duties to occupy her mind, she would be happy and content in the care of her relations.

But in the quiet, isolated farmhouse, where all were employed in domestic duties or the arduous labour of the fields, and had little time or inclination for social intercourse or conversation, Laura Bridgman, now a young woman, missed the pleasant life and companionship, the animation and the varied interests, of the institution. She seemed gradually to lose her interest in life, her appetite failed, and she showed every symptom of going into a decline. Dr. Howe was sent for, and he pronounced her to be slowly dying of nothing else than homesickness. On his return to Boston, the kindly doctor dispatched Miss Paddock to bring the poor girl back to the busy hive which she had come to love as "home." It was the depth of winter when Miss Paddock arrived at the Bridgmans' home.

"I have come to take you home," she said to Laura.

"When do we start?" telegraphed the wasted fingers.

"As soon as you can eat an egg!" was the practical reply. Laura had been living on crust coffee or toast water for weeks.

A few days later the girl's constant prayer "to be taken to Boston" was complied with. But it was with the greatest difficulty that the journey was safely accomplished. It was only with the most unremitting care that, under the terrible weather conditions, the faint spark of life was kept flickering. It was at first feared that Laura had reached Boston too late, but with careful nursing she soon recovered health and strength among her old friends and companions.

Two years later the experiment was again tried of leaving Laura at home with her parents. But after the usu I summer vacation was over, the poor girl began to pine and droop once more, and before the winter was far advanced, she had to be sent for and brought back once again to that larger home which

was destined to be hers henceforward.

Laura's education may by this time (1853) be said to have been completed, if that knowledge could be said to be complete to which she was always eager to add. She no longer had any special teacher, but shared some of the lessons of the other pupils, and was a respected member of the large family at the institution. She made friends with many of the blind girls, and spent much of her time with the matron, Miss Moulton. Laura had, too, the pleasure of a daily visit from her mentor, Dr. Howe, a privilege which she valued very highly. Every afternoon she was taken by one of the teachers or attendants for a long walk.

When the annual vacation came round, Laura usually

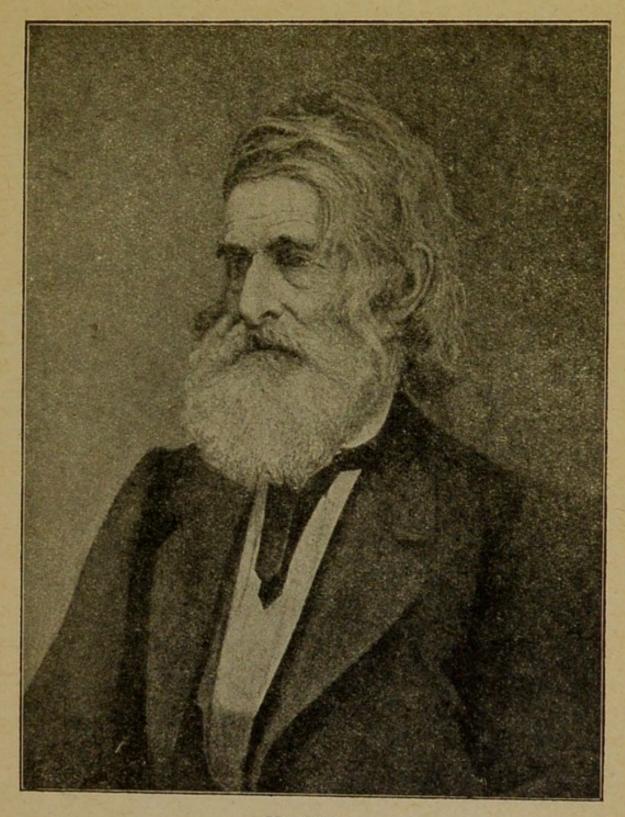
spent part of it at her old home at Hanover, and part with her friend, Mrs. Morton, at Halifax. After a time, as her circle of friends increased, she abandoned her journal in favour of letter-writing. She was a good and regular correspondent, and used to send special letters to all her friends on birthdays, and at Thanksgiving and Christmas.

The passing of the years brought changes to Laura as to us all. As a child and a young girl, the cultivation and education of her mental faculties was continuous and progressive. The dawn of each succeeding day opened out new vistas of thought and knowledge -fruitful communion with other minds. But with the departure of her last and favourite teacher, it seemed to her as if one of the links that connected her with the wonderful world of knowledge was broken. Apparently she began to realise her limitations, and the all too narrow confines of her silent, sombre, little world. Some of the eager zest and joyous dreams of childhood were gone, to give place to the calm steadfastness of womanhood. In her letters and her journal for this period we find less of the joy of life, and a plaintive note of resignation that is new.

In the year 1860 Laura heard of the death of her sister Mary. This bereavement appears to have had a marked effect in turning Laura's thoughts to things spiritual. She underwent a "religious experience," as a result of which she joined the Baptist Church in 1862. For several years afterwards a change seemed to have come over Laura's mind and general outlook on life. Her letters were peculiarly pietistic and

formal in tone.

Daniel Bridgman, Laura's father, died in the autumn of 1868. By his will he left the farm and homestead



DR. HOWE

to his son John, on condition that he gave a home to his mother and his sister Laura. John Bridgman, however, interpreted this provision in so niggardly a spirit as to make his mother and sister Laura unhappy and uncomfortable. Hearing that Laura felt uneasy about her future, Dr. Howe wrote to her mother in 1871 to assure her that, as long as Laura lived, she should have a home in the Perkins institution.

The cottage home system having been adopted for the housing of the blind girls at the institution in 1872, it was thought best that Laura should take up her residence as a member of one of the cottage families. She lived a year at each in turn, took a share in the lighter household work, and helped to teach sewing in the work-room. Not only a skilful needlewoman, but a most efficient teacher, she remained a great favourite with her pupils.

These latter years were to Laura made up of busy and peaceful and contented days. She rose early, and spent some time reading—usually the Bible—before beginning the day's work. She was fond of company, and after a long and busy day she keenly enjoyed any form of social intercourse until almost any hour at

night.

As time rolled on, Laura grew older gracefully. Her character grew sweeter, and gentler, and mellower with age. Of her it was said with truth: "Few human lives have ever been open to the scrutiny that she was always subject to, and how few could stand it as well as she!" She retained her trim, slim, and erect figure to the end. For a long time she clung to the idea that she would marry, but latterly she looked always the prim little New England spinster she was fated to remain. She retained her fondness for dress,

but she grew to realise the value of money, and was

necessarily careful in spending.

The summer of 1875 was saddened to Laura by the knowledge of the failing health of her greatest friend and benefactor, Dr. Howe. He returned to Boston in October, and assisted by his daughter Julia and her husband, Mr. Anagnos (afterwards Dr. Howe's successor as principal), continued to take an active interest in his beloved institution almost to the last. He was stricken down on the 4th January, 1876, while on one of his daily visits, and never afterwards recovered consciousness, passing away on the 9th. His last moments were sacred to his relatives, but they brought in to the side of his death-bed the woman to whom as a child he had given, if not sight, understanding and the inward vision. "She was allowed to touch his features very softly, and a little agonised sound, scarcely audible, alone broke the silence of the solemn scene. All who were present deeply felt the significance of this farewell." So passed this great and good man, whom Whittier, in his poem, "The Hero," called "the Cadmus of the blind."

Laura pined after her beloved teacher and master, as if he who had given her what was almost more than life were really her father. She wished for nothing more than to follow him to the grave. Nevertheless, she lived on for many years—lived to take part in the celebration of the jubilee of her own entry to the institution. The festivities were kept up on her fifty-eighth birthday, the 21st December, 1887. She was much gratified with the gifts and the many kind wishes of which she was the recipient, and the jubilee helped to sweeten the closing years of her life.

The summer which was fated to be her last was spent at Hanover, but the winter of 1888-89 found

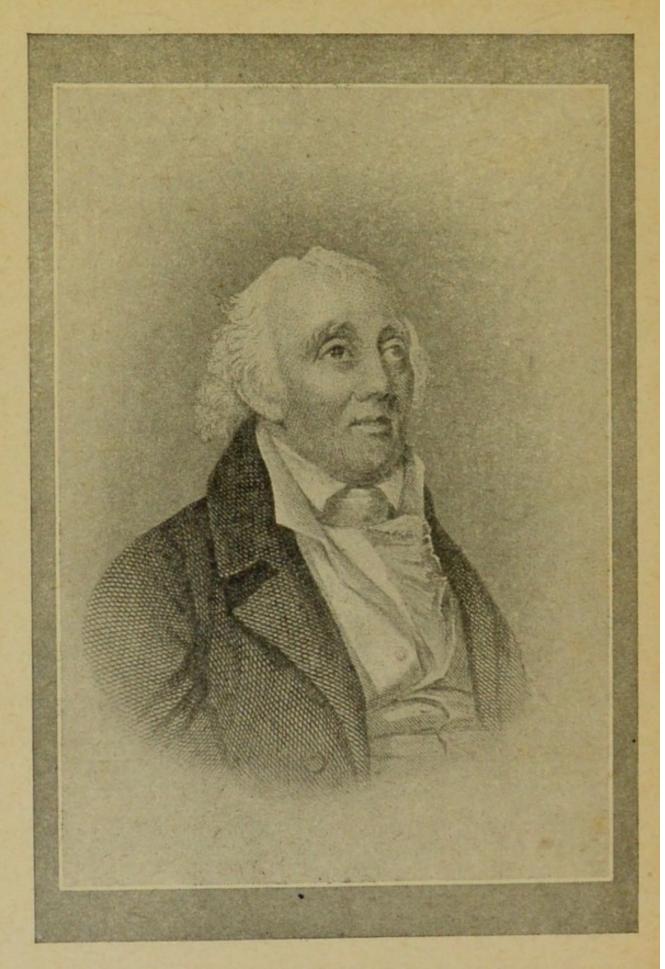
Laura in Boston. She still continued to lead a busy, useful life as of yore, but seemed to be more dependent on the society of her friends than formerly. Laura fell ill in the spring of 1889. When she took to her bed she sent for a friend, who read to her passages from "The Imitation of Christ," which she called, "the peaceful book."

Laura grew gradually worse. Towards the end she tried to form some letters, but her hand was already stiffening. A friend guessed the word she was trying to form, and spelled the word m-o-t-h-e-r into her hand. Laura nodded and smiled. This was her last effort of consciousness before she passed quietly away on Friday, 24th May, 1889.

Her birthplace is also her resting-place. In a quiet corner of the churchyard at Hanover lies all that is mortal of Laura Bridgman. But the pathos of the story of her shadowed life, and the fame of her achievements as the first to respond to the summons which called her forth into the light, have penetrated beyond her own New England home to the farthermost parts of the earth. Her education marked a step forward and upward in the education of her afflicted brothers and sisters the world over.

Along the path that she so laboriously trod, others have been enabled to advance from the inner darkness and silence into the light and animation of the outer world—the world of joy and love and knowledge, and all that makes life worth living. Only those who can understand a human being with the yearnings of a woman cramped and confined within the faculties of a child, can appreciate to the full the nature of the triumph over herself and her limitations which Laura Bridgman, with the aid of her mentor, Dr. Howe, was able to achieve.

The growth of a mentality, receiving impressions almost entirely through the medium of others, and seldom as the result of experience—the development of a mind which was uninfluenced by exterior agencies and happenings, from which it was cut off by the absence of the principal sensory channels, was of the greatest interest and value to scientists in general and psychologists in particular. It was thought that the effect of environment could have been minimised, or even eliminated, leaving the character malleable and plastic to a unique degree. But the case of Laura Bridgman only makes it clearer that the human mind, however isolated, is swayed by forces and tendencies. inherited and otherwise, which are as yet but dimly understood. For this reason and for its sheer human interest, the moving story of Laura Dewey Bridgman will be read by many for generations to come.



FRANÇOIS HUBER

FRANGOIS HUBER

IT is a striking fact, if somewhat of a paradox in the history of the human race, that a man without sight should add more even to one department of the world's knowledge than any of his predecessors; that, sightless as he was, he should solve many of Nature's secrets which had baffled the keen eyes of philosophers and observers since the dawn of history. If one were to cast round for the most unlikely and unpromising occupations for a blind man—those for which his affliction would, for all practical intents and purposes, apparently disqualify him-certainly among the first to occur to the mind would be that of a naturalist. Sight is generally considered to be absolutely indispensable to the scientist, particularly if his investigations are based on actual and exact observation, and more especially if he turns his attention to the study of small objects such as insects. Yet there has been an instance of a man who, though totally devoid of sight, not only devoted himself to such a branch of science but excelled in it.

This man was François Huber, the famous Swiss savant, who, though blind from his youth, became a lifelong student, a scientific observer, and finally, an authority of world-wide renown on the life and habits

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of the bee. There is no more necessity for exaggeration in narrating the life of Huber than there would be in unfolding the marvels of the microcosm of the hive. The truth is sufficiently surprising and interesting. Suffice it to say, that this blind man laid the foundations of most of our modern scientific knowledge of the subject to which he devoted his life.

François Huber was born at Geneva on 2nd July, 1750. His father, Jean Huber, was for many years a soldier. Latterly he became a friend of Voltaire's, and being a man of cultured tastes and versatile abilities, he was a prominent member of the coterie at Ferney. He wrote verses which won praise even from the cynical Voltaire, and having made a study of aeronautics, published in 1784 a valuable series of "Observations sur le vol des oiseaux" ("Observations on the Flight of Birds"). In his hours of ease and social intercourse, Huber père was a sprightly and original conversationalist and an accomplished musician. He was an adept at cutting silhouettes, those quaint old-time precursors of the modern photograph. The Hubers had, in fact, already made their mark in the literary and scientific world. Marie Huber (1695-1753), great-aunt to François, was a voluminous writer on religious and theological subjects, and translated and epitomised The Spectator.

Young François early showed signs of having inherited the family versatility and ability. He always gratefully admitted that he owed a great deal to the early guidance and training of his father. The son began to attend the public lectures at the University at an unusually early age, and under the direction of good masters he developed a taste for literature, which his father carefully fostered and encouraged. Huber père also inculcated in his son a love of nature and a

fondness for natural history, which was destined to play an important part in shaping his future career. François attended the lectures of M. de Saussure, and by his fondness for experimenting in the laboratory of a relative, soon showed his bent towards the physical sciences.

His was a studious and precocious youth. Could it have been that the prophetic perception of a coming calamity impelled him to crowd into a few short early years the visual impressions of a lifetime? He had all the ardour of youth, alike in his pursuit of knowledge and his avidity for all kinds of reading. The passionate eagerness with which he followed his studies by day was only equalled by his absorption in the reading of romances by night-sometimes, it was said, by no stronger light than that of the moon. At all events, the strain was too great. Like many another bookish youth has done, before and since, he was burning the candle at both ends. Nature rebelled, and when he was about fifteen years of age his health broke down, and his eyesight began to show signs of being seriously impaired. His father took him to Paris to consult the physician Tronchin with regard to his general health, and Wenzel, the eminent oculist, on the state of his eyes. Tronchin detected a tendency to consumption, and with rare sagacity insisted on the adoption of what were in those days considered heroic methods. He strongly advised his patient to go at once and live a quiet life in the country, and to eschew study and excitement as he would the plague.

Accordingly, François, acting on Tronchin's advice, went to Stein, the village near Paris, and there he lived the placid, healthy, uneventful life of a peasant, following the plough, and occupying himself wholly in

agricultural pursuits. This Spartan life, and the complete change in his mode of existence, proved a striking success as far as his general health was concerned. At the same time he acquired a knowledge of, and a love for, country life and pursuits and pleasures which never afterwards left him.

With regard to his eyesight, however, matters were sadly different. The oculist Wenzel had told François that he was suffering from cataract. He thought it unsafe to risk the operation for its removal, which was not then so well understood as now. There was, in fact, he gave François plainly to understand, every possibility that he would, before very long, become totally blind.

The young Swiss student could at first hardly bring himself to realise the magnitude of the impending misfortune, but the gradually failing light brought it home to him with terrible significance. No more would he see the glories of the sunrise on the virgin snows, the changing yet changeless panorama of the mighty Alps, or the varied beauties of Lake Geneva, the faces of his loved ones, or the pages of his cherished books. But he pluckily endeavoured to meet the crushing affliction of total loss of sight with all the fortitude at his command.

Happily he had found some consolation in another direction. Before his departure from Geneva, and after his return, his eyes had, in spite of their weakness, encountered and been attracted by the sparkling ones of Mademoiselle Marie-Aímée Lullin, the daughter of one of the Syndics of the Republic. They had met each other frequently, and loved one another with all the ardour possible at the age of seventeen. When François began to be threatened with blindness, however,

M. Lullin, Marie's father, resolved at once to put an end to what he considered to be merely a youthful and foolish attachment. He refused his consent to the proposed match. But Marie was equally resolute. She made no secret of her love for François, and she considered, now that he was losing his sight, that she was bound in all love and honour not to forsake him. "Now that he requires a guide to be every moment with him, nothing shall prevent me from being united to him," she said.

Clearly this was something more than the usual love affair between sweet seventeen and callow and impressionable youth. Their mutual affection ripened and matured with the passing of the years. Marie-Aimée was no ordinary, passive, colourless girl, but a young lady who knew her own mind. She decided to wait until she had attained her legal majority, that is, until she had reached the age of twenty-five. Then, notwithstanding her father's persuasions, entreaties, and even commands, she was duly married to the man to whom she had plighted her troth years before, and to whom she remained faithful, despite his affliction.

Their union turned out to be an ideally happy one. Mlle. Lullin brought her husband a comfortable dot. To add to their happiness her father soon relented, and his approval of their matrimonial venture, though belated, was none the less welcome. Madame Huber, from the first days of their married life, bestowed the tenderest care on her blind husband. She read to him, wrote for him, made observations for him, and in every way endeavoured to be a solace to him in his deprivation; tried, in fact, to take the place of the missing sight—to be his very eyes. With the ingenuity born of affection she discovered countless ways of alleviating

the hardships of his affliction. During the many wars of that troubled period she formed little model armies with pins of various sizes, and thus enabled him to distinguish the positions of the different corps; she likewise stuck pins in a map, which gave him a correct idea of the movements of the troops; and she even moulded in relief, plans of the places they occupied, and the principal battlefields of the time.

In fact, such an ideal helpmeet was she, and so happy and comfortable did she make her husband, that he sometimes asserted that he would be miserable were he to regain his sight. "I should not know," he said, "to what extent a person in my situation could be beloved. Besides," he would add, with a playful touch of humour, "to me, my wife is always young, fresh, pretty; and that is no light matter." This mutual love and tenderness characterised their relations throughout their long life together of over forty years. Voltaire frequently alludes to their happy married life in his correspondence, and his sketch of the Belmont family in *Delphine* was generally admitted to be a true and charming picture of the Huber domestic circle under another name.

But although in comfortable circumstances, Huber was not content to live a life of leisured ease. It has been said that he early manifested a fondness for natural history, and this was given a practical bent and application by his life amid rustic surroundings, when he learned to observe the habits of the wild animals, birds, and insects of the countryside. He had read of, and been interested in, the experiments of Réaumur, and his own friend, Charles Bonnet, the Swiss naturalist and philosopher. Huber's conversations with the latter also helped to turn his attention to the study of bees. There

was to him something intensely fascinating in the life of those busy little insects, with their incessant industry and orderly habits, their ingenuity and their wonderful instincts. During his residence in the country he had grown interested in them, and afterwards read all he could about them. Then, wishing to verify for himself some statements which he could not otherwise have confirmed, he became deeply interested in the subject. He began to realise that here, ready to his hand, was a marvellous field of inquiry and research, then but little worked. So he set himself to learn all that was to be learned about bees, their ways and habits, to study them scientifically, and to record the results of his observations.

His blindness, however, appeared to offer an insuperable obstacle to any systematic research work such as that to which he proposed to devote himself. To watch the bee in the odorous, throbbing gloom of the hive, or a-wing in the dazzling sunlight of high noon, requires the keenest vision. To study the swarm in all its multifarious activities, then so little understood, or to dissect the minute anatomy of the individual, necessitated something more. It required besides sight, infinite patience and an unwearying interest, the scientific mind—a brain capable of building up from the detailed results of observations, the whole connected history of the subject. François Huber was possessed of all these faculties except what most of us would regard as the supremely important one of sight. But even this great deprivation was not to be allowed to stand in the way of genius.

Huber cast round him for some way out of the difficulty. Sight was necessary, and as he himself lacked it, he must needs use the eyes of another. After

a time it occurred to him that his man-servant François Burnens, who was a steady, reliable fellow, might possibly be able to assist him in the matter. sounded Burnens and found him willing to do his best. Huber accordingly began to train his servant in the art of scientific observation, directing his attention by the most ingenious and artfully framed questions, and more important still, firing him with his own keen and ardent enthusiasm and absorbing passion for the work. In this way, partly checking his assistant's reports by his own youthful recollections, and partly correcting or confirming them by the testimony of his wife and friends, Huber acquired a remarkably clear and accurate knowledge of the most minute facts connected with bees, their life, habits, and instincts. "I am much more certain," said he to a friend one day laughingly, "of what I relate, than you are yourself, for you publish only what you have seen with your own eyes, whereas I take a medium among the testimony of many." Plausible reasoning, but to most people the old saying, "Seeing's believing" will still hold good.

Of the joint labours of Huber, whom he calls "the master and classic of contemporary apiarian science," and his faithful assistant Burnens, the Belgian author and poet, Maurice Maeterlinck, has written in his own

beautiful "Life of the Bee":-

"In the annals of human suffering and human triumph there is nothing more touching, no lesson more admirable, than the story of this patient collaboration, wherein the one who saw only with immaterial light, guided with his spirit the eyes and hands of the other who had the real earthly vision; where he, who, as we are assured, had never with his own eyes beheld a comb of honey, was yet able, notwithstanding the veil

on his dead eyes that rendered double the veil in which nature enwraps all things, to penetrate the profound secrets of the genius that had made this invisible comb—as though to teach us that no condition in life can warrant our abandoning our desire and search for the truth. I will not enumerate all that apiarian science owes to Huber; to state what it does not owe were the briefer task. His 'New Observations on Bees'... have remained the unfailing, abundant treasure-house into which every subsequent writer has dipped;... there is not a single one of his principal statements that has been disproved, or discovered in error; and in our actual experience they stand untouched, and indeed at its very foundation."

The accuracy and importance of the results obtained by Huber are ample proof that his observations, even when secured by proxy, were exact, his methods thoroughly scientific, and his deductions logical and correct. This blind man, aided only by a faithful servant, studied the genesis of swarms, and was the first to give a veracious account of that wonderful periodical migration—that sacrifice to the future of the race, when some two-thirds of the population of the hive leave their home, built at the cost of such incessant industry. He it was who first discovered the secret of their sudden desertion (with the exception of the males or drones. and a few thousand workers) of the ample stores of golden honey which they had so assiduously gathered, leaving it for the use of the generation to come, and going out themselves into the wilderness to begin their life-work all over again.

Huber confirmed, by repeated observations, the discovery of Schirach, at that time disputed, that the worker-bees, hitherto considered as sexless or neuters,

were really undeveloped females; the difference between them and queen-bees being accounted for by the fact that the larvæ of the future workers are weaned after a few days, while the future queens are fed on the milky food known as "royal jelly" until they are fully grown. The development of the queen-bee as compared with her subjects is remarkable. She grows larger, lives longer, her colouring is more brightly golden, her sting is curved; and while she has none of the apparatus of the worker, she has all the equipment befitting her position as mother of the hive. We know, of course, that when a young queen emerges from her cell, her first and instinctive impulse is to kill her potential rivals. Sometimes it happens, although the bees take special care to prevent it, that two queens are hatched simultaneously. Whenever this does take place, a deadly duel begins as soon as they leave their cradles. But there is one extraordinary feature of this strange combat which Huber was again the first to remark. Every time the rival queens happen to present their cuirasses in such a way that the drawing of the sting would prove mutually fatal, they fly apart in sudden panic, as if they realised that the death of both would endanger the continuance of the race. Nevertheless, the fight goes on until one can kill the other without risk of injury to herself. With equal vividness he describes the massacre of the drones and all the other strange happenings of the hive.

Huber was, too, the first to make known to the world that the mysterious nuptials of the queen-bee, the prolific mother of swarms, are celebrated, not in the hive, but high up in the air, far above the ordinary range of flight and human vision. He placed on record also the consequences of the early or late

celebration of this aerial hymen, and the revolution that takes place in the hive when a strange queen is introduced instead of its rightful lady mother.

Though a born scientist, our blind hero was neither a merely bookish savant nor a dryasdust. He was a very genial and a very human man. Of a distinctly practical bent, he was remarkably capable, considering the handicap of his affliction. For example—and to this fact must be attributed to some extent the number and value of his discoveries about bees—it is to his fertile brain that we owe the invention of several forms of glass observation hives. One particular type of these he called ruches en livre or en fewillettes, book or sheet hives; and another he termed ruches plates or flat hives. These observation hives of course permitted the life and labours of the bee community to be witnessed in their most minute details.

No account of Huber's labours in the bee world, however brief, would be complete without special mention of those of the faithful and indefatigable Burnens. He had acquired such zeal for the discovery of truth, and such enthusiasm in scientific pursuits, that he would fearlessly face the wrath of an entire hiveful of bees to ascertain an apparently unimportant fact. He was even known to seize an unusually large wasp, despite the stings of the whole colony. In carrying out his master's researches to prove that, under certain circumstances, worker-bees lay eggs which produce drones, Burnens, with a patience amounting almost to heroism, took every bee singly out of two hives, examined them, despite their stings, and placed them in fresh hives. It would be easy to multiply instances of the devotion and self-sacrifice of this faithful fellow.

The rumblings of the French Revolution had hardly died away when, in 1792, François Huber published, on the recommendation of his friend, Charles Bonnet, the results of his labours, in the form of letters which he had written to that gentleman. The volume was a revelation, not only to the general reading public of those days, but also to expert naturalists and scientists. These latter could not fail to appreciate the novelty and importance of Huber's researches, and the significance and accuracy of his observations and their results, particularly when they realised the immense difficulties, which, on account of his affliction, had attended the labours of the blind scientist—difficulties which would have paralysed the energies of a less resolute and less gifted man.

Huber rounded off the tale of his accomplishments by the possession of a clear and elegant literary style. It was unique in combining the lucidity of the scientist with the graphic, descriptive powers of a keen and practised observer, and the polished periods of a cultured man of letters. This was the more remarkable when it is remembered that he, from the data of numberless separate observations and a miscellaneous collection of unconnected facts, contrived to compose scientific memoirs of logical sequence and ordered beauty. Four years later his first volume was reissued under the better known title of "Nouvelles Observations sur les Abeilles" ("New Observations on Bees").

Turning aside for a moment from the work to the man, let us try to secure a glimpse of Huber in his hours of ease and relaxation, and as he appeared to his numerous friends. As will already have been gathered, he was no pedant. True, he was a specialist who had

achieved success and fame in one particular sphere of scientific research, but he was not bowed down beneath the weight of any extraordinary erudition. He was no recluse, but, happy in the bosom of his growing family, he kept in touch with affairs, and frankly enjoyed life in all its aspects. Gifted with a pretty wit and considerable vivacity of manner, his was a most attractive and winning personality. Having an excellent memory he was a first-class raconteur, and with his ready fund of good stories was a welcome member of a large social circle. He shared the partiality of most blind people for sweet sounds. A lover of poetry, he was passionately attached to music, which was throughout his life his favourite and most delightful recreation. In his prime he had, too, a pleasing singing voice, which was heard at its best in his favourite Italian music.

Like most kindly and lovable men, Huber was a true friend. It was a pleasure to him to write to the absent ones, and he was the most faithful and even punctilious of correspondents. But it was indicative of his independent spirit that he should wish to communicate with them directly without the intervention of a secretary or amanuensis. It occurred to his inventive mind that he might to some extent overcome the handicap of his affliction by the use of a printing press.

Under his directions a printing press was accordingly constructed by his new servant, Claud Lechet, who was possessed of considerable mechanical ability. The process and apparatus are thus described by a contemporary:—

"A series of numbered cases containing small printing type, executed in bold relief, which he arranged in his hand. On the lines thus composed

he placed a sheet of paper blackened the a particular kind of ink, and above that a sheet of white paper; with a press, set in motion by his foot, he succeeded in printing a letter, which he folded and sealed himself, greatly delighted with the idea of that independence of others, which he hoped to acquire by this means."

This contrivance for taking an impression off the type-face would seem to have been a forerunner of the typewriter and the inked ribbon. Huber soon came to the conclusion that the difficulty of putting the printing press into action was too great, and he abandoned the use of it as being too cumbrous and tedious. The type-letters, however, together with some algebraic characters made of baked clay, which his son Pierre had moulded for him, were a source of occupation and amusement to him for many years.

Huber did not permit the success of his first published work to be an excuse for any relaxation of his labours, nor did the unsettled state of the country, and the wave of unrest which followed the French Revolution, and continued through the turmoil of the Napoleonic wars, trouble or disturb him in his quiet, rural retreat. Absorbed in the contemplation and investigation of the wonders of Nature, he continued, almost without interruption, his splendid and unobtrusive work on behalf of science. He had lost the services of the invaluable Burnens, and experienced, as was to be expected, great difficulty in replacing him. devoted wife came to her blind husband's assistance again for a time. Their young son, Pierre, who was the apple of his father's eye, and was afterwards destined to follow in his footsteps, was by this time growing up into a comely youth. It was arranged that

he should take Burnens' place, and devote most of his time to making observations and otherwise assisting his father. That he not only did the work efficiently and well, but took a deep and abiding interest in it, is sufficiently vouched by the success of his own subsequent researches in cognate scientific subjects.

François Huber was the first to discover and explain the process of the production of wax by bees, a process which at that time (1793) was engaging the attention of scientists. First observing that the wax was exuded in flakes from between the scales or rings of the abdomen, he proceeded to examine further. detected the presence of a series of interior receptacles or pouches, from the coating of which the wax is secreted, and within which it accumulates till it raises the scales and becomes visible externally between the rings of the abdomen. In the second volume of his "New Observations on Bees," he describes with great minuteness the anatomy of these pouches or receptacles for wax, which are peculiar to working bees. He demonstrated, too, by a well-conducted series of experiments, that, in a natural state, the quantity of wax secreted is in proportion to the consumption of honey.

With unwearying patience our blind scientist pursued his investigations in the production and utilisation of beeswax and propolis. Once again he was the first to be able to explain the method which the bee employs to render the tiny scales or plates of wax malleable or plastic, so as to be ready for use in building up the honeycomb. The bee first of all withdraws with its hind feet the plate of wax from between the abdominal rings, and carrying it to the mouth in a vertical position, commences to cut it with its jaws, at the name

time pouring on a frothy liquid like saliva. The resultant plastic mass is the beeswax, ready for moulding by the genius of this wonderful insect into that most perfect piece of architecture—the honeycomb of a hive.

He assisted, too, in tracing the origin of propolis or bee-glue. Knowing that it was essentially resinous in its origin, he placed some branches of the wild poplar before a hive, and found that the bees eagerly secured the varnish issuing from round the buds. An examination of its chemical properties proved that it was practically identical with the propolis inside the hive.

Huber devoted himself to laborious researches and investigations concerning the building and formation of the hive, and followed step by step the wonderful process and geometrical symmetry of its construction. He was able to describe in detail the labours of the community of bees from the beginning of the first cell to the completion of the honeycomb, which for exactness of execution and vastness of conception excels any human undertaking. In short, our blind philosopher may be said to have done more than any other man to fill in the missing chapters of the wondrous story of the hive, and to demonstrate the strange and immutable laws which its tiny inhabitants instinctively and unhesitatingly obey.

Our blind philosopher endeavoured, but with less success, to clear up the uncertainty which surrounded the questions of the possession and location of the sensory organs in bees, and more particularly that of the sense of smell and hearing. He found that their scent was keen enough to direct them towards a supply of honey, even when it was concealed. After an exhaustive

series of experiments, he came to the conclusion that the organ of smell was situated in or about the bee's mouth. As to their hearing, among other items of beelore which he ascertained for himself, was that just before young queens are liberated from the cocoons, they send forth a peculiar piping sound, and this is answered by the old queen, who must hear the song of her aspiring rivals. Then, too, in the course of his inquiries into the ravages of the sphinx atropos, the sinister moth that bears a death's-head on its wings and forces its way into the hive, he came to know that it is the humming of its own strange note that terrifies the bees into a state of panic-stricken helplessness.

A series of curious researches on the respiration of bees next engaged Huber's attention. He devised and directed the carrying out of many interesting experiments, and soon confirmed his original idea that pure air and a supply of oxygen was as necessary for the respiration of bees as for that of any other creature. He was puzzled by the fact that in a hive which was to all intents and purposes hermetically sealed, with the exception of the tiny entrance, and in which the air would naturally quickly become vitiated, a dense swarm of bees could live, and move, and have their being. Eventually he came to the conclusion that the bees, by a peculiar movement of their wings, set the air in motion in such a way as to produce its renovation. This was soon proved to be the case. A number of bees, while keeping their feet on the floor of the hive, imitate the action of flying. The resulting currents of air effectually ventilate the hive. The proverbial and familiar humming of the hive can be thus accounted for.

These investigations into the respiration of bees rendered necessary some analyses of the air in bee-

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hives, a fact which brought Huber into correspondence with Senebier, who was then occupied with similar researches in connection with vegetables. Among the means that Huber at first devised for testing the nature of the air in beehives was the plan of placing various seeds to germinate there, the idea being that they would not do this if the atmosphere were deficient in oxygen. This experiment, though ill adapted to the end proposed, suggested to the two scientists the idea of becoming collaborators as well as friends, and jointly occupying themselves with inquiries on germination. The most astonishing aspect of their associated labours was, that it was frequently Senebier, the sighted man, who suggested the experiments, and Huber, the blind man, who carried them out. They collaborated, too, in the writing of the records of their joint researches, which were published under the title of "Mémoires sur l'Influence de l'Air dans la Germination des Grains."

François Huber published the history of his later investigations in the second volume of his work. In the introduction to this volume he mentions the death of M. Bonnet and of his dear wife. The latter's share in his work had been taken by his son Pierre, who partly edited this particular book, which was published in 1810. The father's mantle seemed already to be falling on the son, who in after years carried the same untiring spirit of zeal for truth and scientific research into the allied subject of ant-life. The results of his activities may be found in his Recherches sur les Fourmis.

The death of his beloved wife Marie-Aimée, after over forty years of happy married life, was to François Huber a heavy blow indeed. She had been to him

something more than the partner of his joys and sorrows; she had been a support to his blindness, a comforter in his affliction. Marie-Aimée had come between him and the callousness and brutality of the outer world, and now that she had gone for ever, he missed her sorely. He was fortunately blessed with good and affectionate children, and, when his wife died, he went to live with his married daughter, Madame de Molin.

There is an interesting pen-picture of Huber in the closing years of his life, to be found in the works of James Holman, R.N., the famous blind English traveller of those days, who, passing through Geneva in July, 1821, paid a visit to the Swiss savant, then over seventy years of age. Holman writes of Huber as being not only a naturalist, but "a deep mathematician and an accomplished musician." The English traveller proceeds:—

"At this time he was residing at his country house, about a mile and a half from Geneva. We here found him walking alone in his garden, for which purpose he has a string extended along a particular walk, which assists in guiding his steps with confidence when engaged in deep mental research." But Holman held that, notwithstanding Huber's European reputation and fame as a scientist, he was seen at his best in the bosom of his family. "His integrity, benevolence, and urbanity have secured the respect and affection of all around him." He concludes: "M. Huber's reception of me was cordial and flattering; and after too short a visit . . . I was impressed with indelible sentiments of respect and veneration for this truly amiable man and indefatigable philosopher."

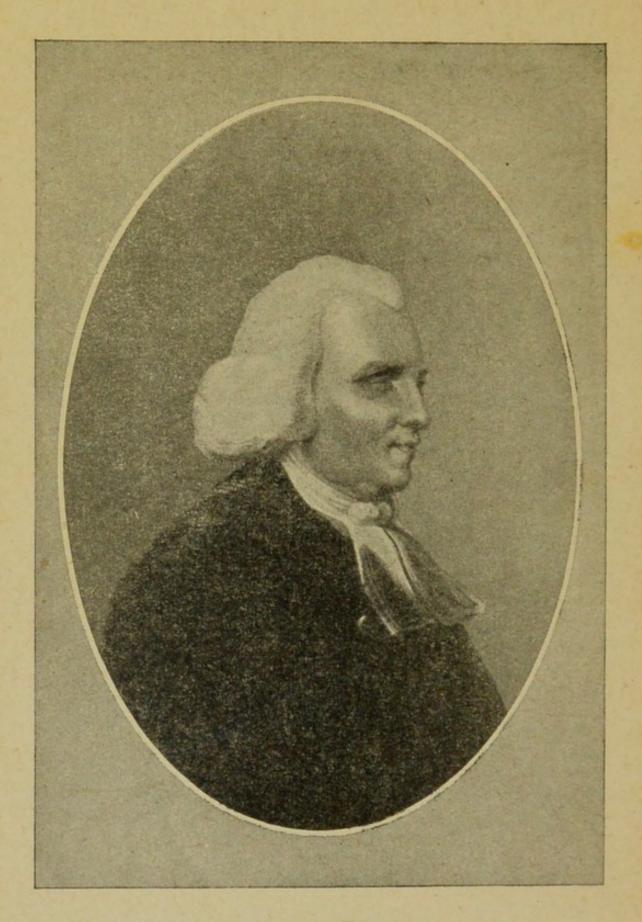
The veteran scientist continued to interest himself

to some extent in his favourite pursuits, but his principal life-work was done, and what once absorbed all his energies and most of his attention was now only a hobby and a pastime. The discovery of stingless bees in the neighbourhood of Tampico, Central America, by Captain Hall, interested him greatly, and he was more than gratified when his friend Professor Prévost sent him, first a few specimen bees, and then a whole hive full of the insects. This was the last flicker of interest in what had been the paramount and absorbing study of his life.

François Huber, now a venerable old man, preserved his faculties unimpaired to the end. His kindly and even genial nature made him universally beloved. Rich in the wisdom that is gained not from books only, but from the great volume of Nature, mellowed by years and experience, chastened, but not cast down by affliction, his was a benevolent and patriarchal figure. At the age of eighty-one he wrote to one of his friends: "There are moments when it is impossible to keep one's arms folded, and it is then, in unbracing them a little, that we can repeat to those whom we love all the esteem, the affections, and the gratitude with which they inspire us." Further on he added: "I can only say to you that resignation and serenity are blessings that have not been denied to me." He wrote these lines on 20th December, 1831, and two days later he calmly breathed his last in the arms of his daughter at Pregny, near his native Geneva.

So passed a true scientist; not a mere impaler of butterflies, but a lover of truth and of knowledge. Living in darkness himself, he heroically strove to throw light in dark places for the enlightenment of

others and the advancement of science. A lover of Nature, he found amid its wonders not only his lifework, but manifold proofs of the design of a great Creator. A lover of his kind, François Huber was beloved by all who knew him.



DR. T. BLACKLOCK

DR. THOMAS BLACKLOCK

DINBURGH, in the latter part of the eighteenth century, was not merely the "grey metropolis of the North," that is, politically and commercially speaking, but was the head centre in matters intellectual and literary as well. In addition to being the headquarters of the professional classes, and of a strong university element, it was the home of a cultured and exclusive literary circle. Among the members of the latter were such well-known names as David Hume, Adam Ferguson, Mrs. Cockburn, the Duchess of Gordon, Lord Monboddo, Dr. Robertson, Dr. Blair, and last but not least, Dr. Blacklock. It is with the last named that we are chiefly concerned. He had more of the poet in his constitution than of the doctor of divinity, and he was such a gentle, kindly soul that he was universally liked and esteemed. Well educated, and of a cultured cast of mind, he was a worthy member of the literary coterie of the Scottish capital. His home was one of their favourite meeting-places, and was visited by the famous Dr. Johnson. This man, with the timid gait, and the benevolent, placid countenance, who was the friend of Robert Burns and young Walter Scott, and whose descriptive writings won the admiration of Edmund Burke, began life as the blind son of a bricklayer !

Thomas Blacklock, as Dr. Johnson tells us, "did not remember to have seen light," for, less than six months after he was born, on 10th November, 1721, he lost his sight through smallpox. Of humble parentage—his father being, as has been said, a bricklayer—he was fortunate in being a member of a family circle where education was valued, and knowledge prized, both for their own sakes, and for the advantages they brought in their train. Little Thomas was, of course, in those days considered to be absolutely disqualified by his affliction from following any trade, and this and the state of the family resources forbade his aspiring to the higher professions. His father, therefore, kept his son in the house, and fostered the inclination which the boy early showed for books, by reading aloud to him-first, the simple little books of childhood's days, and as his tastes developed, more serious and mature literature.

Young Blacklock, by his gentleness and kindness of disposition, soon made many friends, who were assiduous in reading to him interesting and instructive works. Poetry was, even in his early youth, his favourite reading, and he took an enthusiastic delight in the works of Spenser, Milton, Prior, Pope, and Addison, and that bard of the country of his birth, Allan Ramsay. From loving and admiring the poets so much, he early endeavoured to imitate them, and when scarcely twelve years of age he began to write verses. Among these early efforts of his immature muse there is an ode addressed "To a Little Girl whom I had Offended," which is superior to much of the juvenilia that is only brought into notice by the later fame of its author.

So his early youth passed quietly and uneventfully enough—too quietly, perhaps, for his future welfare.

Dr. Thomas Blacklock

Taking part in few games, and having little opportunity for exercise, he led a sedentary life even then, and did not have the compensating advantage of improving his education beyond learning a little Latin. To add to his misfortunes, just when he had attained the age of nineteen, his father was killed by the fall of a malt-kiln. This loss, a serious one to any young man, was to Thomas Blacklock, thus deprived of the support of his youth, and through his affliction and early training, or want of training, unable either to support himself or improve his education, doubly severe. Physically delicate, and temperamentally sensitive, this bereavement accentuated the despondency and depression to which he was already inclined, and which occasionally clouded the later years of his life.

He lived with his mother for about twelve months after his father's death, and attained a local celebrity as a young man of rare talents. He had, as we know, received little education beyond a smattering of Latin, and some acquaintance with the poets. Poetry still remained his most absorbing interest. Fortunately poesy flourishes as well in a wild and native soil as in a cultivated one. Blacklock began to essay the composition of more ambitious poetical pieces, and several of his productions were circulated in manuscript, gaining him many new friends and admirers.

Some of these effusions were shown to Dr. Stevenson, an eminent Edinburgh physician, then on a visit to Dumfries. That gentleman was so much impressed by the fact of such remarkable verse being written by a blind and practically uneducated youth, that he decided to assist him to go to Edinburgh, there to give his natural talents the assistance of a classical education. Accordingly Dr. Stevenson proceeded to make

the necessary arrangements, and Blacklock went to Edinburgh in 1741. Henry Mackenzie, in his account of the Life and Writings of Blacklock, asserts that he was enrolled a student of divinity at the University; but as a course of languages and philosophy was requisite before this could be done, the other version, that the blind youth attended the grammar school until the outbreak of the Rebellion of 1745, is more likely to be the correct one.

During the unsettled state of the country which followed the Jacobite rising of 1745, Blacklock returned to Dumfries, where he lodged with his married sister. He was by no means idle during his enforced vacation, and in the following year a small collection of his poems was published in Glasgow. A second and enlarged edition was published at Edinburgh in 1754, the poet clearing 100 guineas by the venture.

At the close of the Rebellion he returned to Edinburgh and resumed his studies, which occupied his attention for the next six years. Towards the end of that time he made the acquaintance of David Hume, the historian, who was then engaged as librarian to the Faculty of Advocates.

Hume proved a true friend to Blacklock, and helped him in every way in his power. He introduced the work of the blind poet to Joseph Spence, Professor of Poetry at Oxford, the friend of Pope and the patron of Richardson. That gentleman interested himself in Blacklock and his work, and in 1754 published an elaborate and ingenious "Account of the Life, Character, and Poems of Mr. Blacklock." This account, in a condensed form, he prefixed to a quarto edition of the poems which was published by subscription in London in 1756, and had so large a sale that a second

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quarto edition and an octavo edition were also published before the end of the same year.

In the year 1757 Blacklock began a course of study with a view to giving lectures on oratory to young gentlemen who were intended for the bar or the pulpit. He consulted his good friend Hume on the project, but the historian doubted its success, and the blind man abandoned the idea. Blacklock, however, was a man of resource, and immediately made up his mind to study for the ministry of the Church of Scotland. Applying himself closely to the study of theology, he passed the usual trials before the Presbytery of Dumfries, and was by that body licensed a preacher of the Gospel in 1759. He achieved a fair reputation as a preacher, and wrote a large number of sermons, of which several volumes in manuscript are still preserved.

At this time Blacklock had a good deal of leisure on his hands, not having been ordained a minister nor appointed to a charge. He lived a very regular and well-ordered life, still composing occasional poetical pieces and writing sermons, with reading, music, walking, and conversation as his principal relaxations. When engaged in a discussion or debate on his favourite theological or ethical subjects, he rarely lost his temper. If he thought himself unfairly treated, his resentment was confined to the making of a few satirical verses, which he usually burned soon afterwards.

He could at times compose with great facility and rapidity. A friend wrote of him: "I have known him dictate from thirty to forty verses, and by no means bad ones, as fast as I could write them; but the moment he was at a loss for rhyme or a verse to his liking, he stopped altogether and could very seldom be

induced to finish what he had begun with so much ardour."

In 1762 Blacklock married Miss Sarah Johnston, the daughter of a Dumfries surgeon and the "Melissa" of his poems. A few days after the wedding he was ordained minister of Kirkcudbright, following on a presentation from the Crown which had been secured for him by the Earl of Selkirk. The two ceremonies coming so closely together must have caused this blind benedict in holy orders a good deal of anxiety and mental strain, hence no doubt the incident narrated by Dr. Cleghorn. It occurred at the inn in Kirkcudbright on the day of his ordination, when, being fatigued, he fell asleep after dinner. "Some hours after, he was called upon by a friend, answered his salutation, rose and went with him into the diningroom, where some of his companions were met. He joined with two of them in a concert, singing, as usual, with taste and elegance, without missing a note, or forgetting a word; he then went to supper and drank a glass or two of wine. His friends, however, observed him to be a little absent and inattentive; by and by he began to speak to himself, but in so low and confused a manner as to be unintelligible. At last, being forcibly roused, he awoke with a sudden start, unconscious of all that had happened, as till then he had continued fast asleep." This is a unique example of somnambulism, but was well vouched for by Mrs. Blacklock and others.

The inhabitants of Kirkcudbright refused to receive their new minister, either from an aversion to patronage or for political reasons, or, as was publicly alleged, because his blindness would render him incapable of performing the duties of his office in a satisfactory

KIRKCUDBRIGHT

manner. After some vexatious litigation extending over two years, his friends and supporters acceded to his own wishes and compromised the matter. He resigned the living and accepted a small annuity in its stead. Four poetical pieces, which he had the good sense not to publish, show how deeply he resented the conduct of the men who had stirred up the people of Kirkcudbright against him. In "Pistapolis," the longest and most spirited satire of them all, his enemies are made to walk in procession, to be pilloried in turn. There is one vacant place, that of R——, a baker, who had been vindictive as a persecutor, and who had since died of "the black jaundice." Here is a specimen of Blacklock's caustic vein:—

"His conduct, when pois'd in the most equal scale, Like his weights, in propriety never could fail; His face and his conscience in colour were one; He knock'd, and all hell cried, 'Anon, sir, anon!"

With only this small annuity as a means of subsistence, Blacklock returned to Edinburgh in 1764. He was not lacking in courage and enterprise, however, and as a means of adding to his income he rented a fairly large house, and received a number of youths as boarders and for tuition in languages and philosophy. He was a gentle soul. No teacher was ever more beloved by his pupils than he; their relations were like those of members of the same family. In their company and in hours of recreation he forgot his affliction, and entered with all the cheerful playfulness of a young man into all the sport and quip and jest of those around him.

As has been said, he was extremely fond of music, and could play several instruments moderately well. The flute was his favourite, and he carried a small

Dr. Thomas Blacklock

flageolet about with him, and if asked, was usually most willing to play or sing for the entertainment of his friends. In the *Edinburgh Magazine* for 1774 there appeared "Absence," a short Pastoral set to music by Dr. Blacklock.

He was still true to his early muse, and composed occasional poems. He found it difficult to dictate unless he was standing, and as his blindness made pacing up and down the room inconvenient, his body insensibly fell into a sort of swaying motion, which increased as he warmed with his subject. The motion latterly became habitual, and although he could sometimes restrain it on ceremonial occasions, it cost him quite an effort to do so. He was conscious of this habit, and has drawn a humorous picture of himself in verse.

The degree of Doctor of Divinity was conferred on Blacklock in 1767 by the University of Aberdeen. Five years later he published in Edinburgh "A Poem occasioned by the Death of Lady Cunynghame of Livingstone." The beautiful woman mourned in this carefully composed elegy was well known in her day as one of "The Three Graces." His next publication was "The Graham" (1774), a heroic ballad, ambitiously designed "to promote the harmony between the inhabitants of England and Scotland," but as poetry only very mediocre stuff.

Dr. Blacklock gradually became a well known and highly esteemed character in Edinburgh society. He came to be one of the brilliant literary circle that adorned the Scottish capital in the last quarter of the eighteenth century. His abilities as a poet may not have accounted for the regard in which he was held, but his blindness enlisted the sympathy of all, and his goodness and

gentleness of character endeared him to his many friends. In his quiet and peaceful home were to be met all those who had any pretentions to wit and culture in the Edinburgh of those days. "There," says one writer, "were heard the chatter of Mrs. Cockburn, the lively tongue of the Duchess of Gordon, with the voices of Adam Ferguson, Lord Monboddo, and Dr. Robertson, as they sat at tea." Amongst this genial Scottish social circle, with its robust and stalwart men of letters, law, and fashion-hard talkers, and sometimes hard livers - the pathetic figure of the gentle and afflicted Dr. Blacklock stands out by force of contrast. Dr. Johnson visited the blind poet at his house and, greatly to Mrs. Blacklock's amazement, drank nineteen dishes of tea!

It was his attitude to the young and then unknown poet Robert Burns which redounded most to Dr. Blacklock's credit, and testified most highly to his critical ability and powers of discernment. In a letter to his friend, Dr. Laurie (1786), who had sent him a copy of Burns' Poems, he thus expressed his high

appreciation of the work :-

"There is a pathos and delicacy in his serious poems; a vein of wit and humour in those of a more festive turn, which cannot be too much admired or too warmly approved." Burns was on the point of emigrating to the West Indies when Dr. Laurie showed him Blacklock's letter. That letter, Burns said, "overset all my schemes by opening new prospects to my poetic ambition. His opinion that I should meet with encouragement in Edinburgh for a second edition fired me so much that I posted for that city." The story of Burns' visit to Edinburgh is well known. During his stay he received much kindness at the hands of "The Doctor." Blacklock

Dr. Thomas Blacklock

did more than merely advise Burns to visit Edinburgh; he set himself to interest the literary critics of the citv in his poems. This was no easy matter. Most of them were devoted adherents of the classical school of poetry. Even Blacklock himself, while admiring Burns as a man, hardly appreciated his unconventionality as a poet, for he wrote:—

"With joy to praise, with freedom blame,

To ca' folk by their Christian name,

To speak his mind, but fear or shame,

Was ay his fashion;

But virtue his eternal flame,

His ruling passion."

Dr. Blacklock, in addition to his services to Burns, was also able to help the youthful Walter Scott, who was even then pronounced "the most extraordinary genius of a boy." "The kind old man," Scott said long afterwards, "opened to me the stores of his library, and through his recommendation I became intimate with Ossian and Spenser."

Notwithstanding his almost invariable cheerful placidity of manner, Blacklock had his occasional dark and solitary hours. Throughout his life he had a nervous and delicate constitution, and this affected his mind and temperament. He sometimes complained of lowness and depression of spirits, which neither the unceasing care and solicitude of his most affectionate wife, nor the attentions of his friends, could entirely banish. Imagination, which can elevate, can also depress the mind, and some of his poems show despondency at the supposed failure of his powers, or his want of success in pleasing the public taste. Moods like this dictated such lines as:—

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"Exhausted genius now no more inspires: But mourns abortive hopes, and faded fires."

Another cause for despondency was that he was subject to periodical attacks of deafness, which caused him to dread the total loss of hearing—practically his only channel of communication with the outer world. Amidst all his troubles and afflictions, however, the gentle kindliness of his nature never forsook him, and he retained the spirit of resignation and faith in the Supreme Being which had sustained him throughout his life.

About the year 1787 his age and failing health called for a degree of quiet and repose which necessitated giving up his practice of keeping boarders. In the summer of 1791 he was seized with a feverish disorder, at first slight, and never very violent; but his weak frame was unable to resist it, and after about a week's illness he died on 7th July, 1791. He was buried in St. Cuthbert's Churchyard, and a monument, with a Latin inscription by Dr. Beattie, author of "The Minstrel," was erected to his memory.

Turning from the man to his work, the odes and elegies of Blacklock are not in themselves very remarkable, although he was at his best in elegiac poetry. Still, his poems are worth reading, not only for the fineness of feeling and the smoothness of versification which characterised them, but also for other qualities which attracted much attention, and caused a good deal of controversy amongst his contemporaries. The accuracy and vividness of his descriptive poetry were considered simply marvellous as the work of a blind man. Such passages as the following in his elegy "On the Death of Mr. Pope" have frequently been the subject of comment and admiration:—

Dr. Thomas Blacklock

"O come! your copious annual tributes bring,
The full luxuriance of the rifled spring;
Strip various nature of each fairest flow'r,
And on his tomb the gay profusion show'r.
Let long-lived pansies here their scents bestow,
The violets languish and the roses glow;
In yellow glory let the crocus shine,
Narcissus here his love-sick head recline;
Here hyacinths in purple sweetness rise,
And tulips ting'd with beauty's fairest dyes."

Passages of this description certainly imply a knowledge of, if not a love for Nature, and a sense of colour which is difficult to explain in the case of a man who had been blind practically from birth.

Various attempts have been made to explain or account for Blacklock's abilities in this direction. Professor Spence, in his account of the blind poet's early life, made an ingenious effort to solve the mystery by metaphysical methods of reasoning, based on the nature of a sightless person's sensations, and supported by quotations from Blacklock's own poems. Henry Mackenzie, a later biographer, ascribes his power of creating verbal images of things he himself had never seen, to the effects of a retentive memory and his familiarity with the work of the classical poets. Dr. Johnson, too, declared that Blacklock's descriptive passages are but "combinations of what he has remembered of the works of other poets who could see." This is giving the blind poet credit for very little originality, and as Mackenzie admits, it throws no light on his early fondness for poetry, "and poetry of a kind, too, which lies very much within the province of sight;" nor does it explain the source of the pleasure which the reading of such verse invariably gave him.

Burke, in his treatise "On the Sublime and Beautiful,"

opines that there is very little of the knowledge acquired by those who see which cannot be conveyed to a person born blind and transmitted by him to others. Discussing the possibility of the existence of innate ideas Burke writes:—

"Since I wrote these papers, I have found two very striking instances of the possibility there is, that a man may hear words without having any idea of the things which they represent, and yet afterwards be capable of returning them to others, combined in a new way, and with great propriety, energy, and instruction. first instance is that of Mr. Blacklock, a poet, blind Few men blessed with the most from his birth. perfect sight can describe visual objects with more spirit and justness than this blind man; which cannot possibly be attributed to his having a clearer conception of things which he describes than is common to other persons." Burke goes on to say: "Here is a poet, doubtless as much affected by his own descriptions as any that reads them can be; and yet he is affected by this strong enthusiasm, by things of which he neither has nor can possibly have any idea further than that of a bare sound."

Blacklock himself, in the article "Blind" in the "Encyclopædia Britannica" (1783), throws some light on the subject, but does not unveil the secret of the source of his own ideas. He writes:—

"To the blind, the visible world is totally annihilated; he is perfectly conscious of no space but that in which he stands or to which his extremities can reach. . . . All the various modes and delicate proportion, all the beautiful varieties of light and colours, whether exhibited in the works of nature or art, are to the blind irretrievably lost."

Dr. Thomas Blacklock

In the same article he strongly advises the parents and guardians of blind children to encourage them to move about in order to overcome their natural timidity, to take plenty of exercise so as to improve and preserve their physical health, and above all, to learn some useful employment, learning to use tools even at the risk of some injury to themselves. Any hardship, in his opinion, and it will be shared by many others, is better

than helplessness, idleness, or dependence.

Blacklock wrote with characteristic sincerity and from experience. He had suffered both mentally and physically from the mistakes made in his early training. For want of a trade or profession he had, in his youth, been dependent, and the mistaken indulgence, which permitted too sedentary habits in his early years, had undermined his health. But with a rare generosity and a fine altruism he imparted to others the wisdom he had gained through much anguish and suffering. Blacklock was one of the first to advocate for the blind sane and rational educational methods and physical training, specially adapted to their needs and requirements. He had not himself enjoyed these advantages, but, nevertheless, his name is writ large in the history of the blind.



JOHN METCALF

JOHN METCALF: "Blind Jack" of Knaresborough

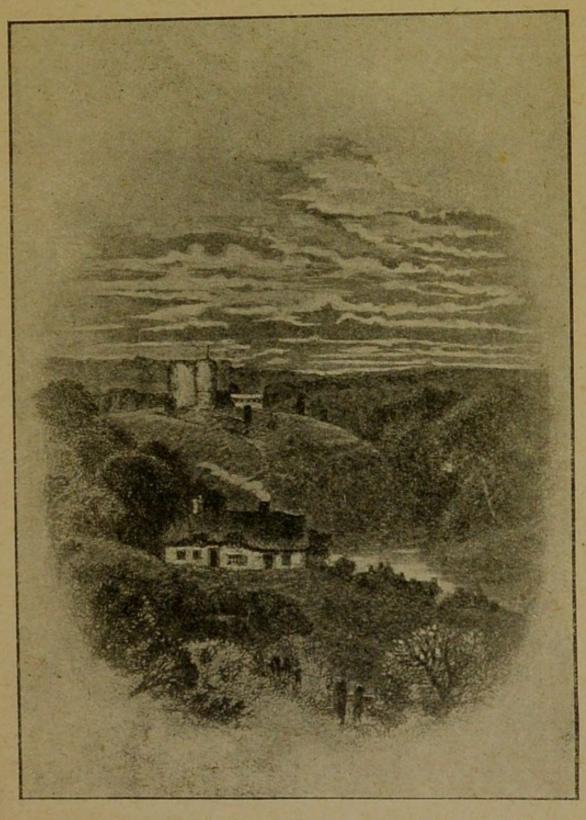
THE eighteenth century in England, as in most European countries, was a time of change and unrest, of wars and rumours of wars, of territorial expansion and growing commercial activity. It was, too, a picturesque period, alike in costume, manners, and personalities, and none the less so because of its contrasts. Those spacious, leisurely days, when Beau Nash lorded it in Bath, appeal to the imagination, as do the vicissitudes and romantic adventures of Charles Edward in quest of a crown. But Bath was not then the sole resort of the élite, nor was the Young Pretender the only adventurer. At the fashionable routs and assemblies in one of the famous "Long Rooms" at Harrogate, standing out against the elegant and lightly moving throng, might have been seen in "the forty-five," or thereabouts, a tall, well-built young man-clad in sombre garb, and with a strong, manly face, but a passive and somewhat wistful expressionwho played the violin. Those among the gay company whose attention he attracted, and they were many, discovered that he was blind. Yet, very shortly afterwards, the visitor to the Harrogate of those far-off Georgian days might have seen the same young man, resplendent in a uniform of buff and blue, stepping out

bravely at the head of a company marching to join Wade's army, and help to crush the Rebellion of 1745. This young man was no other than the famous and redoubtable "Blind Jack" of Knaresborough.

"Blind Jack," or, to give him his proper name, John Metcalf, was one of the most remarkable figures of his time. Sightless as he was from an early age, he was one of the keenest of sportsmen, equally good at games or riding, driving or walking, joking or talking. In a word, he was one of the best of good fellows. He was well known on the rugged roads of the north country, over which he rode or drove his own horse, or tramped, long crook in hand, for many years. But it was his splendid work as the first really great maker of roads in England that has given him the title to an enduring fame.

Metcalf was a scion of the hardy north, a son of the bracing Yorkshire moorland. He was born on the 15th of August, 1717, of humble parentage. His native place was that strikingly picturesque old West Riding town of Knaresborough, nestling in the deep and gorge-like valley of the Nidd, and overlooked by the ruins of the ancient castle. There, in that little, old-world town, with its steep streets and huddled houses, its weird memories of Mother Shipton and the hidden crime of Eugene Aram, little John Metcalf first saw the light. There was nothing sombre or gloomy about him from his earliest infancy. In his case the child was emphatically father to the man, and he rapidly grew into a bright, sturdy little fellow, full of activity and daring, and overflowing with animal spirits.

When four years of age little Jack Metcalf was duly sent to school. He attended school for two years, but at the end of that period he contracted smallpox. As



KNARESBOROUGH, SHOWING THE HOUSE WHERE METCALF WAS BORN, AND THE OLD CASTLE

so often happened in those days, the dreaded scourge attacked the eyes, and despite all that could be done, deprived the sturdy little boy of his sight. Young Metcalf's physical development, however, was not in the least degree hampered by his affliction. He came, in fact, to be probably the most striking example of the exuberance of physical vigour and animal spirits in the annals of the blind. As in youth he was one of the first in the field of manly sports and pastimes, so in later life he distinguished himself by his success, despite his affliction, in whatever field of activity he chose to exert his indomitable energy.

Within six months after his recovery from the small-pox he was able to feel his way from his father's house to the end of the street, and to find his way back without a guide, and before he was nine he could be sent alone on messages to any part of the town. Young Jack grew into a strong and healthy lad, and began to associate with other boys of his own age. He took part in all their pranks, including bird-nesting and robbing orchards, and soon became an expert climber, being able to scale any tree he could grasp. He used to ramble into the fields and lanes alone, and got to know the country round about Knaresborough intimately.

About the age of thirteen he was taught the violin, so that he might obtain a living as a strolling musician, then considered as the sole occupation open to a blind man. As a musician he attained a fair degree of proficiency. But his father kept horses, and Jack was more eager to learn to ride than to play the fiddle. He soon acquired the knack of managing a horse, and having plenty of nerve he generally rode at a gallop. The blind lad's exploits were the talk of the country-

side. His untiring activity, his absolute fearlessness, and his acuteness of sense amazed everyone who came into contact with him. Of course he did not always go scot-free. He learned caution, but never knew the

meaning of fear.

"Blind Jack," as he was now familiarly called, learned to swim when he was about fourteen years of age, and became quite an expert swimmer. With a fearlessness which in a blind lad amounted to heroism, he dived into the Wharfe on one occasion, and was instrumental in saving the lives of three of his companions who were in imminent danger of drowning. Again, in 1731, when two men were drowned in the deeps of the river Nidd, Metcalf was employed in the gruesome task of searching for their bodies, and succeeded in bringing up one of them. On another occasion a friend of his, named Barker, a linen manufacturer, carried two packs of yarn to wash at the river. All at once they were swept away by a sudden flooding of the stream, and carried through the arches of the bridge. The yarn sank a little farther down, in a still pool which was in places about twenty feet deep. Metcalf promised to recover the yarn for his friend. The latter seemed rather doubtful of his ability to do so. The blind man, however, procured some long cart ropes, fixed a hook at one end, and leaving the other to be held by some friends on the high bridge, he descended, and by degrees recovered the whole of the yarn.

Metcalf continued to practise on the violin until he was able to play country dances. During the winter he played in the Christmas waits at Knaresborough with three companions. He likewise attended the assemblies which were held every fortnight, and frequented many other places where there was public dancing. In 1732,

being then fifteen years of age, he was invited to Harrogate to play at the assemblies at the "Queen's Head" and the "Green Dragon." Young Metcalf attracted much attention amongst the ladies and gentlemen visiting Harrogate. Nor was this to be wondered at, for the blind youth was comely, intelli-

gent, and had a pretty wit.

It is narrated of him that one night (in the year 1735), returning through York from a long visit to a friend, he acted as guide to a gentleman who wished to reach Harrogate. The turnpike road had not then been made. The track was hilly and difficult, full of windings and turnings, and often no better than a stony path across the wild and open moors. The blind guide brought the gentleman safely to his inn, "The Granby," at Harrogate, late at night. On Metcalf leaving the room, the stranger remarked to the landlord that the man seemed strange, judging by the appearance of his eyes.

"Eyes! bless you, sir," rejoined the landlord; "don't

you know that he is blind?"

"Blind! What do you mean by that?"

"I mean, sir, that he cannot see—he is as blind as a stone."

"Well, landlord," said the gentleman, "this is really too much; call him in."

Metcalf was called. The gentleman addressed him.

"My friend, are you really blind?"

"Yes, sir," said he; "I lost my sight when I was six years old."

"Had I known that, I would not have ventured with

you on that road from York for a hundred pounds."

"And I, sir," said Metcalf, "would not have lost my way for a thousand!"

Many other good stories are told of his graceless and harum-scarum youth. Before he was nineteen he followed the hunt, and he even kept five hounds of his own. Frequently he hunted with a Mr. Woodburn, of Knaresborough, who kept a pack, and often sought Metcalf's company in the chase. About this time (1736) Metcalf, with some other young fellows of the neighbourhood, wanted a day's sport, and asked Mr. Woodburn for the loan of the Knaresborough pack of hounds. He had often lent them to Metcalf before, so they did not doubt the success of their application. Mr. Woodburn, however, could not this time oblige them, having arranged to meet a certain Squire Trappes with the hounds next morning upon Scotton Moor, for the purpose of entering some young foxhounds. Chagrined at this, Metcalf debated with himself whether Mr. Woodburn's friend or his own should be disappointed.

Resolved that it should not be the latter, he arose next morning before daybreak and crossed the high bridge, near which he had the advantage of the joint echoes of the old castle and Belmont Wood. He had brought with him a remarkably good hound of his own, and taking him by the ears, made him give mouth very loudly. This was so effective that, in a few minutes, he had nine couples of hounds around him. The animals were kept by various people round about the shambles, and were allowed to lie unkennelled.

Mounting his horse, away he rode with the dogs to Harrogate, where he met his friends ready mounted, and in high spirits. Some of them proposed going to Bilton Wood, near Knaresborough, but this was opposed by Metcalf, who preferred the Moor; he was, in fact, apprehensive of being followed by Mr. Woodburn, and

wished to be farther from Knaresborough on that account. Accordingly, they drew the Moor at the distance of five miles, when they started a hare, killed her after a fine chase, and immediately put up another.

Just at this moment, however, up came Mr. Woodburn, naturally very angry, and threatening to send Metcalf to the house of correction. Growing still more incensed, he rode up with the intention of horse-whipping Metcalf, but this the latter avoided by galloping out of his reach. Mr. Woodburn then endeavoured to call off the hounds, but Metcalf, knowing the fleetness of his own horse, ventured within speaking, though not within striking, distance of him, and begged that he would not spoil sport by taking them off, and that he was sure they would kill in a very short time. Metcalf soon found that Mr. Woodburn's anger was cooling, and approaching nearer to him, apologised profusely for his conduct.

The apology sufficed for this good-natured gentleman, who, giving the hare to Metcalf, desired he would accompany him to Scotton Moor, whither, though late, he would go rather than wholly disappoint Mr. Trappes. Metcalf proposed to his friend to cross the river Nidd at Holme-bottom. Mr. Woodburn did not know the ford, so the blind man once more undertook the office of guide, and leading the way, they soon arrived at Scotton Moor, where Mr. Trappes and his company had waited for them several hours. Mr. Woodburn explained the cause of the delay, and Mr. Trappes being inclined to take the matter in good part, the affair ended quite harmoniously.

At the age of twenty-one, this stalwart son of the West Riding was extremely robust, and stood fully six

feet one and a-half inches in height. He was of splendid physique and indomitable pluck. Nor was he lacking in a rollicking sense of humour. Returning one day on foot from a distance, he had proceeded about a mile, when he was overtaken by a Knaresborough man on horseback, who proposed, for a consideration, to let him ride in turn, dividing the distances equally. Metcalf agreed, provided that he should have the first ride. The other assented, but only on condition that he (Metcalf) should ride a little beyond a certain field, where he would see a gate on his right hand, to which he should fasten the horse. Metcalf, however, rode right on to Knaresborough, seventeen miles from the place where he left his fellow traveller. The latter on his arrival was greatly annoyed at being obliged to walk so far, but Metcalf pleading in excuse that he never saw the gate, the man was compelled to join in the laugh at his own expense.

Metcalf was an inveterate wanderer, and while still a young man he had travelled and "seen," as he termed it, a good deal of his native country. He travelled one year on horseback to Whitby, whence he sailed to London. He took his violin with him, and by its aid was able to earn enough to maintain himself for several weeks in the metropolis. He returned to Whitby, and then went to Newcastle to "see" some friends, and on to Sunderland, where he again supported himself by his violin-playing. Once more back to Whitby for his horse, he rode alone by Pickering, Malton, and York, over very bad roads, most of which he had never travelled before. When he approached York in the middle of the night, the city gates at Middlethorp were closed. Metcalf soon ascertained that they were made of heavy timber, with spikes on the top. He un-

buckled the reins off his horse, threw them over one of the spikes, pulled himself up, and managed to get safely over. Then opening the gates from the inside he led his horse through. He got back to Knaresborough without further adventure.

After spending the winter at Harrogate as usual, he was off to London again the following year. This time he was accompanied by a friend who played the small pipes. Metcalf roamed about London and its environs, visiting Maidenhead and Reading, and such places of interest as Windsor Castle and Hampton Court. When the time came for his return to Harrogate, a Colonel Liddel, of Ravensworth Castle, near Newcastle, whose acquaintance he had made, and who was also about to set out for Harrogate, offered Metcalf a seat behind his coach. Metcalf declined his offer with thanks, remarking that he could easily walk as far in a day as Colonel Liddel could drive, and that he preferred to walk. It may seem incredible that a blind man could walk a distance of 200 miles over unknown roads as quickly as a gentleman could travel by coach with post-horses. The fact remains, however, that Metcalf, leaving London on a Monday morning, reached Harrogate in six days, two days before the Colonel. The latter, with his retinue of sixteen servants, had perforce, on account of the execrable state of the roads, to rest at Wetherby over the week-end.

When the close of the season at Harrogate brought the assemblies to an end, Metcalf usually stayed on for a few days. It was such an occasion as this, that, in the year 1739, saw the beginning of what may be said to have been the romance of his life. It must be remembered that he was a fine, big, strapping

spirited young fellow, not bad looking, and, in addition, sympathy on account of his affliction was enough to awaken tender feelings in many girls' hearts. Be this as it may, he certainly attracted the notice of Miss Dorothy Benson, the daughter of a hotel-keeper. On the other hand, her thoughtful attention and invariable kindness first won his gratitude, and then inspired a sincere regard and a warm affection. Knowing, however, that her mother would oppose any idea of marriage on their part, they had perforce to employ various devices to conceal their tacit engagement and frequent meetings. But the course of true love, as so frequently happens, did not run smooth.

Metcalf had to leave the town on business for a time. During his absence a Mr. Dickinson had paid his addresses to Miss Benson, and now urged his suit, no doubt seconded by the young lady's mother, with such success that the banns were published, and the wedding-day appointed. This came to the knowledge of the blind man on his return. He had thought himself secure in Miss Dolly's affections, but though he loved her tenderly, his pride prevented him from manifesting his feelings or attempting to prevent her marriage with his rival if she were a willing party to the match.

On the day preceding that on which the marriage was arranged to take place, however, Metcalf, riding past the house, was accosted with, "One wants to speak with you." He immediately turned towards the house, and there, to his joy and surprise, he found the object of his affections, who had sent her mother's servant to call him. After some explanations, an elopement was resolved upon, which Metcalf, with the assistance of a friend, effected that night, and the next morning Miss Benson and our hero were duly married.

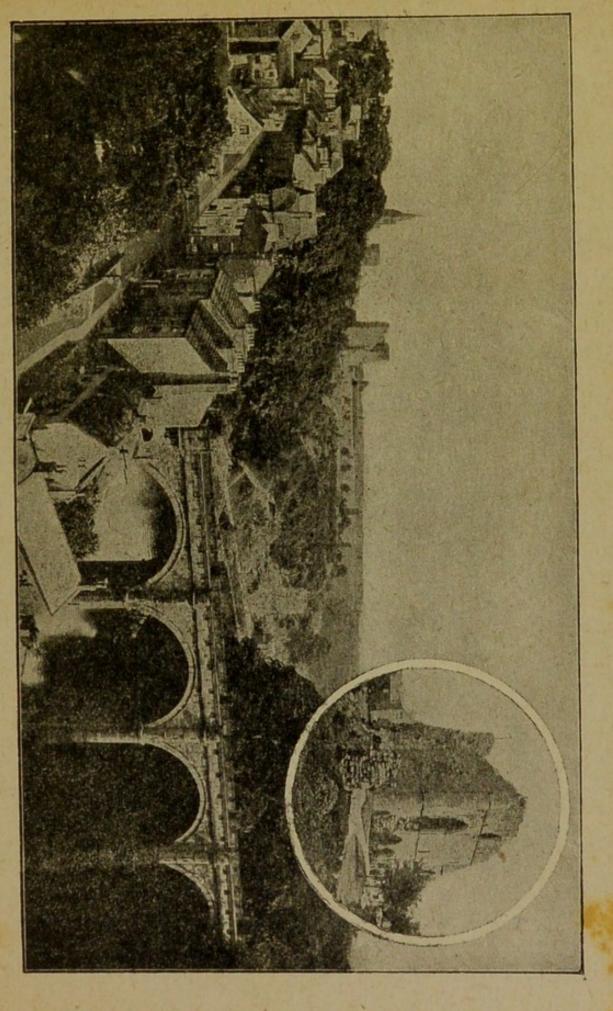
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The confusion of his rival, who had provided an entertainment for two hundred people, may easily be imagined. Mrs. Benson was not unnaturally annoyed at her daughter's conduct, and refused either to see her or to give up her belongings; nor was she reconciled to her until the birth of her second child, on which occasion she stood sponsor to it, and presented Metcalf with his wife's dower.

It was long a matter of comment that Dolly Benson, as handsome a woman as any in the country, should have preferred to marry a blind man. A lady having asked her why she refused so many good offers for that of "Blind Jack," she answered, "Because I could not be happy without him." And being more particularly questioned, she replied in the quaint diction of the period, "His actions are so singular, and his spirit so manly and enterprising, that I could not help liking him."

Metcalf now purchased an old house and had it rebuilt, he himself getting the necessary stones out of the bed of the river. While residing for the most part at Knaresborough, he continued to play at Harrogate in the season, and occasionally at Ripon. He also set up a four-wheeled chaise and a one-horse chair plying for public hire, the first vehicles of the kind in the district. He kept them going two summers, when the innkeepers began to run chaises, and he sold his conveyances. About this time, too, he also gave up racing and hunting.

Still in search of some less precarious and more regular means of earning a livelihood than music, he bought horses and went to the coast for fish, which he conveyed all the way to Leeds and Manchester. So indefatigable was he, that he frequently walked for



MODERN KNARESBOROUGH, AND THE OLD CASTLE

two nights and a day with little or no rest. With his new responsibilities of wife and family, he was as keen in business as he had previously been on sport and pleasure.

On one occasion, going from Knaresborough to Leeds in a snow-storm, while crossing a brook, the ice gave way under one of his horses, and he had to unload it to get it out. The horse, as soon as it was free, trotted off home to Knaresborough, leaving Jack with two panniers of fish, and three more horses already laden. Such was his pluck and resourcefulness that, undaunted by the difficulty of the task, he divided the weight of fish amongst the other three horses, and pursuing his journey, duly arrived in Leeds at break of day. But the profits of the fish trade were so small, and the travelling over the execrable roads so laborious, that Metcalf gave up the business.

At the time of the outbreak of the Rebellion of 1745, Metcalf was engaged as first violin in one of those resorts of fashion, the "Long Rooms" at Harrogate. The news of the defeat of the Royal army at Prestonpans caused general consternation. The York county authorities having voted a sum of £90,000 to raise a body of 4000 men, it was decided to retain them for local defence. Mr. Thornton, of Thornville Royal, a Knaresborough squire, was not satisfied with this arrangement, and decided to raise, at his own expense, a company of volunteers for active service with the army at the front. Looking round him for the best man to enlist recruits, he decided to consult Jack Metcalf. Jack was extremely popular, and had already a shrewd knowledge of human nature. He could judge character with wonderful quickness-"taking stock," as he called it, of those with whom he came into

contact, with unerring rapidity. Our hero agreed to act as assistant recruiting sergeant, and to enlist the services of as many likely men as possible. In a couple of days he had obtained no fewer than 140 men, from which number Mr. Thornton selected sixty-four, the strength of the company he had decided to raise. After being drilled, the company marched off to Borough-

bridge to join General Wade's forces.

Blind Jack, who made a fine figure, standing as he did some six feet two inches in height, and dressed in blue and buff, with a gold-laced hat, marched at their head to the strains of martial music. On reaching Newcastle, Mr. Thornton's company was drafted to Pulteney's regiment. The student of history will doubtless be familiar with the marchings and counter-marchings of Wade's army. Blind Jack was with the forces right through the campaign, beginning with the wintry march to Hexham, which was intended to check the advance of Prince Charles southwards through Carlisle. On those cold winter nights Metcalf often played lively tunes on his fiddle, while the men danced round the camp fires to keep themselves warm, the ground being frozen too hard to allow of tent-pegs being driven.

But the rebels had already passed south on their historic dash to Derby. General Wade returned to Newcastle, and when Prince Charles' forces retreated northwards again via Penrith and Carlisle, harassed in the rear by the Duke of Cumberland, Wade's army advanced by forced marches into Scotland. It came up with the Highlanders at Falkirk. At the battle of Falkirk, Blind Jack played his company into action. The result of the battle was a disastrous one for the Royalist forces. Thornton narrowly escaped by going into hiding, and twenty of his men were made prisoners.

Metcalf returned to Edinburgh with the rest of the defeated army. He was sent for to headquarters at Holyrood, and questioned about his captain. One of the officers of Dragoons spoke ironically of Thornton's men, and asked Jack how he had managed to escape. "Oh," said Jack with equal irony, "I found it easy to follow the sound of the Dragoons' horses; they made such a clatter over the stones when flying from the Highlandmen." Another officer asked him how he, a blind man, dared venture on such a service? To this his reply was equally apt. He retorted that had he possessed a pair of good eyes he might possibly not have risked the loss of them by gunpowder.

Jack was by this time anxious on account of the continued absence of Mr. Thornton, and set out, contrary to his friends' advice, in the direction of the Jacobite camp to search for him. He reached Prince Charles' headquarters in the company of a rebel spy, pretending that he wished to be engaged as a musician in the Prince's army. Unluckily for him, however, someone who had seen him at Harrogate, pointed him out as a suspicious character. He was taken to the guard-room and searched, and after three days' imprisonment was tried by court-martial. But as no offence could be brought against him, he was liberated, and shortly afterwards escaped from the rebel camp. Returning to Edinburgh he was delighted to find that Captain Thornton had arrived there before him.

The Duke of Cumberland reached Edinburgh on the 30th of January, 1746, and at once took command of the Royal army, which moved northwards in pursuit of the Highlanders. The Duke gave a ball at Aberdeen. The only band with the army was the brass band of the Buffs, the members of which were mostly Germans.

Metcalf was found to be the only man in camp who could play country dances. He was called upon to provide the music for the twenty-five couples who took the floor, and play he did with a will, standing on a chair for eight hours—the Duke several times, as he passed him, shouting out "Thornton, play up." Next morning Metcalf received a present of two guineas from his highness.

Not long afterwards came the battle of Culloden, in which the aspirations of the Jacobites were crushed for ever, and the Highland forces met with complete and irretrievable defeat. On the morrow of the victory Captain Thornton, Metcalf, and the Yorkshire Volunteer Company started on their long march southwards, and arrived at Knaresborough travel-stained but triumphant. Metcalf's young wife had been very anxious for the safety of her dear blind adventurer, but knowing his courage and resourcefulness, she felt that only by mischance could he be harmed. She was glad to have him safely home, and he for his part determined to settle down to the steady pursuit of business.

Before deciding to take up any new occupation he fulfilled his engagements at Harrogate as usual. During his marches in Scotland, he had come across various articles manufactured in that country which he thought he might dispose of to advantage in England. Accordingly he repaired in the spring to Scotland, and furnished himself with a variety of cotton and worsted goods. He assumed the rôle of a chapman or pedlar, and found a ready sale in England for the Scots goods. Among scores of articles he knew what each cost him, from his particular mode of marking them.

At the same time he dealt in horses, taking York-shire horses to Scotland and bringing back Galloways

in return. He made his choice by feeling the animals, and did a good deal of buying and selling horses about this time. The Queen's Bays were then quartered at Durham, and four horses were to be sold from each troop. Metcalf only received notice of the sale the day before it commenced. He set off, however, that same afternoon for Durham, and after riding all night, got there by daybreak. His first business was to get to know the farriers, who told him that amongst the horses to be disposed of was a grey one. The drummer who had charge of it, not having been sufficiently careful in trimming the horse's hoof, had burnt it severely, which caused a huge swelling. Had this carelessness become known to his superiors, he would, of course, have been punished for it, and upon that account the matter was hushed up.

Metcalf, apprised of the real cause of the swelling, determined to purchase the horse, rightly supposing that it would be sold cheap. The sale began with the disposal of seven grey horses, six of which a gentleman bought for carriage horses. They then brought forward the other lame grey horse, which our chapman bought at a very low price. Having used such remedies as he thought necessary for the recovery of the horse, by the time he had got it home he had the satisfaction of finding it perfectly recovered. Within a week afterwards Metcalf refused fifteen guineas for it. He kept it many years as a draught horse, and his other purchases also sold at a profit, so that he was very well paid for his trip to Durham.

In 1754 our hero initiated a new venture. He set up a stage-coach between York and Knaresborough, being the first on that road, and drove it himself—twice a week in the summer, and once in winter. This

business, with the occasional conveyance of army baggage, employed his attention for several years.

For some time the Second Dragoons (The Queen's Bays) were quartered in Knaresborough and the neighbouring towns; but after a short stay, they were ordered to the north. The country people were reluctant to supply waggons for conveying the baggage, the King's allowance being only ninepence a mile per ton; that of the county, one shilling in the West Riding, and fifteenpence in the North Riding. Metcalf, having two waggons (one of them covered), decided to try this business; and to make sure of a journey, got the soldiers to press his two vehicles; these were promptly loaded, and he himself went with them to Durham. Previous to loading, however, the country people, who knew the advantage of carrying for the army, and who had kept back in hopes of an advance in the price, came forward with their waggons in opposition to Metcalf, but the soldiers would have no others. Arriving at Durham, he met Bland's Dragoons on their march from the north to York. They loaded his waggons again for Northallerton, and would willingly have engaged them to York, but this he was obliged to decline, having promised to bring twenty-three woolpacks to Knaresborough. He was just six days in performing this journey, and cleared, with eight horses and the one he rode, no less a sum than twenty pounds.

Metcalf was equally at home on foot or in the saddle, in the camp or in the market-place. He lived in a time of transition. During Walpole's long administration, England had enjoyed a period of unexampled prosperity, disturbed only by the feverish speculation of the South Sea Bubble. The process

of industrial and commercial expansion continued, despite the excursions and alarms of the two Jacobite Rebellions. The population was rapidly increasing, and sought new outlets for its energies. It was a time of awakening, of transition from the pastoral stage, and that of merely local trade and barter, to one of national, commercial, and industrial activity. The evolution of the stage-coach, and the demands of commercial transit alike, necessitated the construction of better roads, a demand which John Metcalf, blind as he was, was one of the first to perceive. Hitherto the making of roads had been carried out on very haphazard and rule-of-thumb methods. Metcalf was one of the chief predecessors of Telford and Macadam, and one of the pioneers in the adoption of uniform and scientific construction.

During his leisure hours, Metcalf studied mensuration in a way peculiar to himself. His numerous journeys had given him an unusual familiarity with the roads in the north of England. He knew how bad they were, and how the defects could be remedied. With characteristic confidence and enterprise he put his theories into practice, and afterwards became one of the most notable pioneers in that branch of engineering rendered famous by his labours and those of Macadam and Telford, namely, road-making and bridge-building.

In 1765 Parliament sanctioned the making of a new turnpike road between Boroughbridge and Harrogate. Metcalf tendered for the construction of that section of the road, between Minskip and Fearnsby, a distance of three miles, and the chief surveyor, Mr. Ostler, who knew him very well, and had every confidence in his sagacity and ability, let him the contract. The

materials for the whole were to be produced from one gravel-pit. He had a temporary wooden hut erected at the pit, took a dozen horses to the place, fixed racks and mangers, and hired a house for his men at Minskip. He often walked from Knaresborough in the morning, with four or five stones of meal on his back, and joined his men by six o'clock. He completed his section of the road well within contract time, and to the entire satisfaction of the surveyor and trustees. Soon after this he contracted for building a bridge at Boroughbridge, which also he completed with entire success.

Metcalf next contracted to make a mile and a half of the turnpike road between Knaresborough and Harrogate. Walking over part of the common across which the road was to be made, he told his workmen that it differed from the rest of the ground, and he told them to dig for stone or gravel. Sure enough, the men came across the stones of an old Roman causeway buried many feet deep, and from this Metcalf procured much valuable road-making material. At another place there was a bog directly in the way, and the surveyor thought it impossible to build the road across it. Our hero assured him that it could be done, and the surveyor told the blind man that if he made the road straight across, he would pay him as much as if it were taken in a detour round the bog. Metcalf set his men to work at once. Acting on his instructions, they laid huge quantities of furze and ling upon the soft, marshy ground, and upon this again layers of gravel. Then they proceeded with the construction of the road as usual, and with complete success. This ingenious device Metcalf employed more than once, notably on the Manchester-Huddersfield road; and it was afterwards adopted by George Stephenson in taking the railway across Chat Moss.

With characteristic energy Metcalf threw himself into his new business of road-making. Obstacles never discouraged him. He seemed to consider a difficulty simply as something to be surmounted. Merely to give a list of the roads he contracted for and successfully completed would be tedious. It will suffice to mention a few of the more important. He was responsible for making the roads between Chapeltown and Leeds; Wakefield and Dewsbury; Wakefield and Doncaster; between Wakefield, Huddersfield, and Saddleworth (the Manchester road); between Huddersfield and Halifax; between Knaresborough Wetherby-all in Yorkshire. In Lancashire also Metcalf carried out extensive road-making contracts. Some of the principal were between Bury and Blackburn, with a branch to Accrington; between Bury and Haslingden, and between Haslingden and Accrington, with a branch to Blackburn. In addition he constructed some of the main cross-country highways in the hilly country between Lancashire and Yorkshire, such as those between Skipton, Colne, and Burnley, and also in Cheshire and Derbyshire-between Macclesfield and Chapel-en-le-Frith, and Whaley Bridge and Buxton.

Concerning Metcalf and his methods, Mr. Bew, a

contemporary, wrote *:-

"The blind projector of roads would reply to me, when I expressed myself surprised at the accuracy of his discriminations, that there was nothing surprising in the matter. 'You, sir.' says he, 'can have recourse to your eyesight whenever you want to examine any-

^{* &}quot;Observations on Blindness and on the Employment of the other Senses to supply the Loss of Sight," by Mr. Bew (Memoirs of the Literary and Philosophical Society of Manchester, Vol. I., pp. 172 and 174). Read 17th April, 1782.

thing, whereas I have only my memory to trust to. There is, however, one advantage that I possess; the readiness with which at pleasure you view any objects, prevents the necessity of fixing the idea of them deeply in your mind, and the impressions, in general, become quickly obliterated. On the contrary, the information I possess, being acquired with greater difficulty, is on that very account so firmly fixed on the memory as to be almost indelible.' . . . I made some inquiries respecting this new road he was now making from Wilmslow to Congleton. It was really astonishing to hear with what accuracy he described the course and nature of the different soils through which it was conducted. Having mentioned to him a boggy piece of ground it passed through, he observed that that was the only place he had doubts concerning, and that he was apprehensive they had, contrary to his directions, been too sparing of their materials."

With regard to Metcalf's own active personal share in the engineering of the roads, Mr. Bew wrote:—

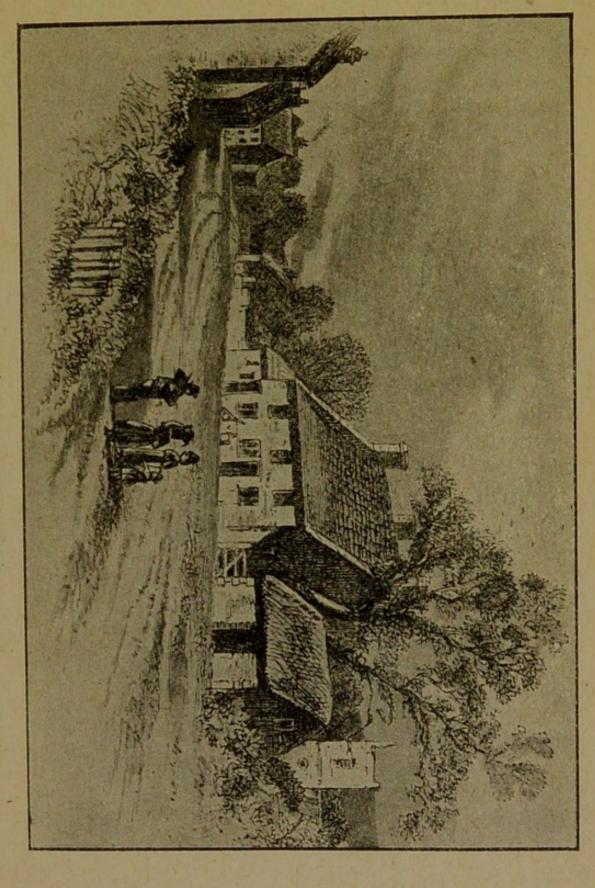
"With the assistance only of a long staff, I have several times met this man traversing the road, ascending steep and rugged heights, exploring valleys, and investigating their several extents, forms, and situations, so as to answer his designs in the best manner. The plans which he makes, and the estimates he prepares, are done in a method peculiar to himself, and of which he cannot well convey the meaning to others. His abilities in this respect are, nevertheless, so great that he finds constant employment. Most of the roads over the Peak in Derbyshire have been altered by his direction, particularly those in the vicinity of Buxton; and he is at this time constructing a new one betwixt Wilmslow and Congleton, with a view to open a com-

munication to the great London road without being obliged to pass over the mountains."

This extraordinary man not only constructed the roads which were planned for him by other surveyors, but, notwithstanding his affliction, himself personally surveyed and laid out many of the most important roads which he constructed in difficult and hilly parts of Lancashire and Yorkshire. His work was of the utmost importance in opening up communications and developing the resources of the two counties, long before the coming of the railway. Previously, the only means of communication was along horse-tracks and mill roads, which were fit only for pack-horses and not for vehicles. The total length of turnpike roads built by Metcalf was about 180 miles, and, including many bridges and culverts, the total contract payments amounted to about £65,000. "Blind Jack" was upwards of seventy years of age before he left off roadmaking. He was even then hale and hearty, remarkably active, and still full of enterprise.

He had, however, undergone a great bereavement. While he was engaged in road-making in the district, he had brought his wife to Stockport. There she died at the age of sixty-one, after nearly forty years of happy, married life, leaving four children. She was buried in Stockport churchyard, and a quaint epitaph was inscribed on her gravestone.*

* "At Harogate in Yorkshire I was Born, but now
my body lies under this stone to
you I've left behind, its sure to be your body
when in dust will lie the same as
me, take care in time to obtain a happy fate
and don't neglect for fear it may be too
late, all those who come these lines to see
prepair in time to follow me."



METCALF'S HOUSE AT SPOFFORTH

One of Metcalf's daughters married a cotton manufacturer in Stockport, and as that business was very brisk at the time, Blind Jack himself embarked on it in a small way. He began with spinning and the allied process of carding, and afterwards bought looms and started weaving. The venture was not a success, however, and he went back for a time to his roadmaking. The road between Haslingden and Accrington has a pathetic interest as being his last contract. He completed this in 1792, and lost money by it, wages having risen.

In the same year (1792) Metcalf retired to his farm at Spofforth, near Wetherby, in his native county. Here, in the intervals of farming, he used to buy hay to sell it again. He would measure the stack with his arms, and having ascertained the height, could readily tell what number of cubic yards were contained in a stack up to the value of hundreds of pounds. Sometimes he bought standing trees, and if given the height, would himself measure the girth and calculate the solid content.

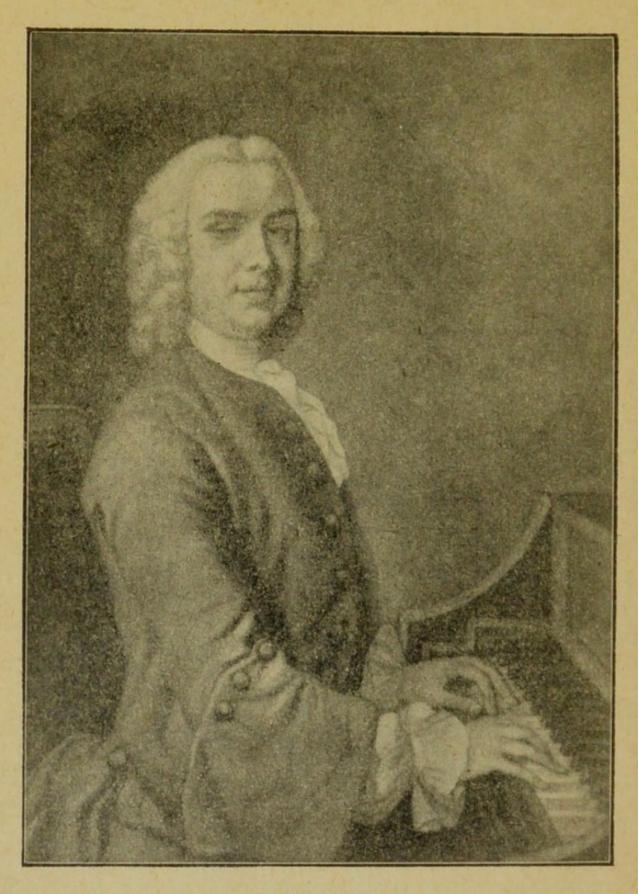
Here, at Spofforth, he lived for many years with a married daughter, who kept house for him. He was happy in the enjoyment of the fruits of his industry, and consoled with the recollections of a full and a well-spent life, even when his advanced age prevented him from engaging in the more active occupations to which he had been accustomed. At last, bowed under the weight of advancing years, this big-hearted man laid down his staff for the last time. He died on the 26th April, 1810, at Follifoot, near his beloved Knaresborough, at the patriarchal age of ninety-three.

He was buried in Spofforth churchyard, and an inscription in verse forms his epitaph:—

"Here lies John Metcalf, one whose infant sight Felt the dark pressure of an endless night; Yet such the fervour of his dauntless mind, His limbs full strength, his spirit unconfin'd, That long ere yet life's bolder years began, His sightless efforts mark'd the aspiring man; Nor mark'd in vain-high deeds his manhood dar'd, And commerce, travel, both his ardour shar'd; 'Twas his, a guide's unerring aid to lend, O'er trackless wastes to bid new roads extend; And when rebellion rear'd her giant size, 'Twas his to burn with patriot enterprise-For parting wife and babes one pang to feel, Then welcome danger for his country's weal. Reader, like him, exert thy utmost talent given ; Reader, like him, adore the bounteous hand of heaven."

He left four children, twenty grandchildren, and no fewer than ninety great-grandchildren to cherish his memory.

It is said that Metcalf retained his shrewd mother wit, and the resolute spirit which were so characteristic of him throughout his long and active life, to the last. His life was one of the most striking examples of the overcoming of the disadvantages attendant on a serious physical affliction such as blindness, of which there is any record. He surmounted difficulties and accomplished tasks which would have paralysed the energies of most men possessed of all their faculties. He indeed rose superior to his lot. As the Admirable Crichton of the blind, and the compeer of Telford and Macadam, he was unique. England was the poorer for his death, and may never again see his like.



JOHN STANLEY

JOHN STANLEY, Mus. Bac.

M USIC has always had a singular fascination for the blind. In the science of sweet sounds they find a solace for dark and lonely hours, and a balm for the wounded spirit that beats in vain against the shuttered windows of the soul. Music to them in some measure takes the place of light and colour, and all that gives the pride and joy of life to the seeing eye. It is an art which they may study and learn independently of others, and on an almost equal footing with those gifted with sight. In fact, although the latter may more quickly acquire facility in fingering the greater powers of concentration and the more sensitive hearing of the blind would almost appear to give them the advantage.

It is not surprising, then, that some of the blind should have excelled in the art of music, which they have made so peculiarly their own, and should have attained high standing in the musical world. Notable amongst the many eminent English musicians of the eighteenth century was the famous blind organist and composer, John Stanley, the compeer and successor of Handel. As a musician and composer he had few equals, and as an organist he had no superior among his contemporaries. Such, at all events, was the opinion of, amongst others, Handel himself.

Stanley was born, as nearly as can be ascertained, on the 17th of January, 1713. He was only a little toddler of about two years of age when one day he somehow got hold of a china bowl. Crossing the marble hearth in his father's house with the bowl in his hands he slipped and fell, with disastrous results.

His eyesight was irretrievably ruined.

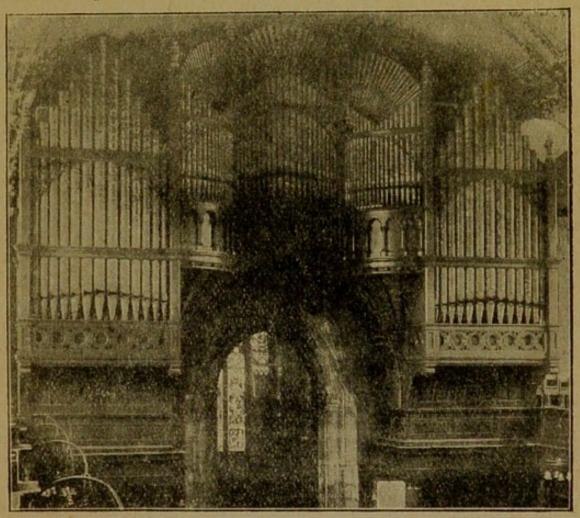
As a bright little blind boy of seven he first began his musical studies. His relatives and friends encouraged him to acquire what they considered to be merely an elegant accomplishment. They did not suppose it possible for him, afflicted as he was, to make of music a profession. His first music master was John Reading, organist of Hackney, and himself an old pupil of Dr. Blow. Stanley's father, finding that John not only took great pleasure and made rapid progress in his music lessons, but was eager to continue them and to learn more, placed his son with Maurice Greene, a well-known music teacher of the period. Under Greene's tuition young Stanley studied with remarkable diligence. A knowledge of music seemed to come to him almost by intuition, and his advancement was phenomenally rapid.

So quickly and so completely did he master the technique of the organ in particular, that, in November, 1723, when he was only eleven years of age, he obtained the post of organist at All Hallow's Church, Bread Street, London. In 1726, at the age of thirteen, he was elected organist at St. Andrew's, Holborn. Counsel's opinion was taken at the time on the legality of electing an organist. There he followed at the keyboard such notable organists as Daniel Purcell and John Isham.

The blind youth continued his musical studies with the utmost energy and enthusiasm. He loved his art

John Stanley

for its own sake, but he was naturally ambitious, and desirous not only of attaining the highest perfection in music, but of achieving the highest distinction in his profession. He specialised with a view to graduating as Bachelor of Music, and on 19th July, 1729, being then only sixteen years of age, he graduated Mus.Bac.



John Stanley was elected organist of this church at the age of thirteen

at Oxford. His success was the more remarkable because he was not only the first blind person to receive the degree, but he was also the youngest recipient ever known at Oxford.

The Benchers of the Honourable Society of the Inner Temple elected Stanley as one of the organists of

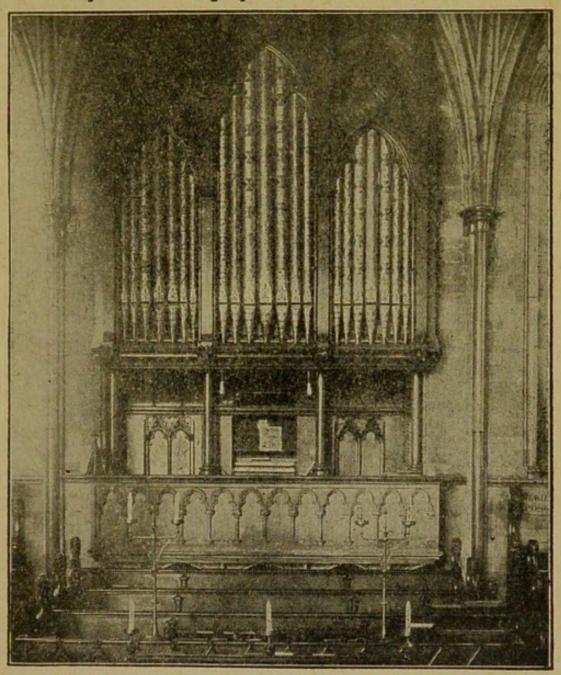
the Temple Church in 1734; and this post he retained until the end of his life. He had numerous other professional engagements. Amongst them was the conducting of subscription concerts in the City, at the Swan Tavern, Cornhill, and the Castle Inn, Paternoster Row, as long as they continued. Frequently he was engaged to play organ concertos, particularly at the then fashionable resort of Vauxhall.

In addition to his abilities on the organ, our hero was no mean violinist. He had two favourite violins, one of them a Steiner, which he used for concerts, and the other one of the Cremona "family," admitted to be among the best in England, on which he played his solos. Both instruments were unfortunately burnt in a fire which took place at the Swan, Cornhill.

While still a young man Stanley met and promptly fell in love with a Miss Arlond, the daughter of Captain Arland, of the East India Company's Service. In their case the course of true love ran smoothly enough, and their marriage was only the beginning of a new lease of happiness. If that tritest of aphorisms could be adapted to read: "Happy is the marriage that has no history," then the wedded life of Mr. and Mrs. Stanley was as felicitous as it was uneventful. Of his gentle partner it can truly be said that she shared alike his joys and sorrows. Their union was not blessed by any offspring, but they drew none the less close in heart and mind as the years rolled on. Mrs. Stanley had no very pronounced musical tastes. but her sister, Miss Arlond, was a talented pianist, and frequently played for her blind brother-in-law. In this connection it is related that such was the accuracy of Stanley's hearing, and so tenacious was his memory, that he could remember and perform any piece of music

John Stanley

after hearing it once. Even when he had to accompany a new oratorio, his sister-in-law, Miss Arlond, it was said, only needed to play over the score once for him.



THE HISTORIC ORGAN OF THE TEMPLE CHURCH, LONDON

It was in the year 1742 that Stanley made his first essay as a composer by the publication of "Six Cantatas for a voice and instruments," the words being by Sir John Hawkins, the future historian of music.

This collection proved so successful that, a few months later, he published a similar set to words by the same author. It would seem as if Stanley, although an instrumentalist of the first rank, and a perfect master and teacher of music, had found his true métier as a composer. He composed three sets of organ voluntaries and concertos for organ and strings,* which are considered to be among the best English instrumental compositions of the eighteenth century. He then turned his attention to more ambitious work, his next composition being an oratorio entitled "Jephthah," which was produced in 1757.

Three years later Stanley joined Mr. J. C. Smith in carrying on the oratorio performances formerly conducted by Handel during Lent at Covent Garden. The blind organist played a concerto in the interval of every performance and accompanied throughout. During this first season of his joint management of the oratorios, the second of Stanley's own oratorios, "Zimri," was produced at Covent Garden. The year 1760 was a busy and prolific one with Stanley. In addition to his playing, teaching, and the composition, arrangement, conducting, and rehearsals of his oratorios, he found time to set to music one of those quaint effusions of the period, an Ode, performed at Drury Lane, and intended both as an elegy on the death of George II. and an encomium upon his successor. In the following year (1761) he composed the music for Robert Lloyd's dramatic pastoral "Arcadia: or, The Shepherd's Wooing," written in honour of, and to commemorate, the marriage of George III. and Queen Charlotte, and staged at the historic Drury Lane Theatre.

^{*} Three of the former, rearranged to suit modern instruments, have been reprinted in A. H. Brown's "Organ Arrangements," 1886.

John Stanley

Notwithstanding his many and varied interests Stanley still kept up his practice on the organ, of which instrument he was a perfect master. Dr. Alcock, at one time a pupil of Stanley's, places it on record that "it was common, just as the service of St. Andrew's Church, or the Temple, was ended, to see forty or fifty organists waiting to hear his last voluntary; and even Handel himself I have frequently seen at both of these places. In short, it must be confessed that his extempore voluntaries were inimitable, and his taste in composition wonderful."

Comparing the accounts of several of his contemporaries, we begin dimly to realise what a master of music and of his favourite instrument Stanley was. Sometimes opening his voluntaries with a dreamy and flowing prelude, he would pass to a poignantly moving minor passage, sobbing like the cry of an anguished Then he would open out the full-toned diapasons until their massive throats tossed forth harmonies of unbridled strength, arresting all ears with the flood of their rolling, as wave upon wave of splendid sound welled upward in a rising tide of melody. But the master hand held the organ's thousand voices as in a leash. He soothed and caressed the keys until the interlacing harmonies swept in pomp and circumstance, and then in stately tumult, along the shadowed aisles. Gradually he called forth the full powers of the instrument until its mighty tones, rolling in ever gathering strength, culminated in a final burst of overwhelming grandeur and majesty, and flung afar a pæan of triumph, ending in a crash of thunderous reverberations which the ensuing silence rendered all the more impressive.

As an instance of his complete mastery of technique,

it is said that at a performance of Handel's "Te Deum in D" (probably the *Dettingen*), he found that the organ was a semi-tone above concert pitch, and without the least preparation he transposed the whole composition. The key into which he changed it (that of C sharp major) was then considered so difficult that it was seldom used, and the blind organist's feat was on that account considered all the more remarkable.

The year 1774 saw the retirement of Smith after fourteen years' joint management of the Covent Garden oratorios, and Stanley associated Thomas Linley with himself in continuing his extremely successful superintendence of their production. In the same year he himself composed another oratorio, "The Fall of Egypt," which was duly performed at Covent Garden.

Five years later Stanley succeeded Dr. Boyce as Master of the King's Band of Music, and after Weidemann's sudden death in 1782 he conducted it in person. Apropos of Dr. Boyce's death, the invaluable Alcock tells an anecdote illustrative of Stanley's wonderfully quick ear and retentive memory.

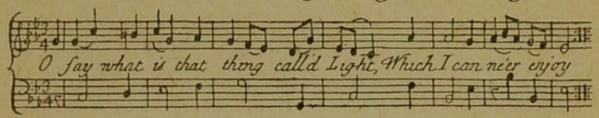
"In April, 1779, as he and I were going to Pall Mall, to the late Dr. Boyce's auction, a gentleman met us who had been in Jamaica twenty years, and in a feigned voice said, 'How do you do, Mr. Stanley?' when he, after pausing a little, said, 'Bless me, Mr. Smith, how

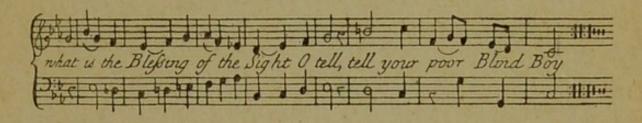
long have you been in England?""

Alcock tells us, too, how during the first year of his apprenticeship to Mr. Stanley, this blind gentleman used to act as guide, and show him the way, both on horseback and on foot, through the quaint, quiet streets of the Westminster of those days, among the narrow

The Blind Boy,

The Words by M. Cibber Loet Laureat to their Majesties, set to Musick by M. Stanly. M.B.





You talk of wondrous things you see.

You fay the Sion shones bright:

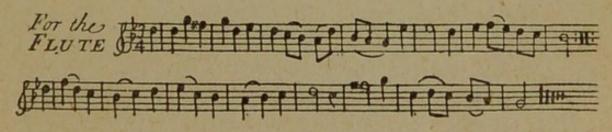
I feel how warm, but how can he,

Then make it Day or Night?

My Day or Night my felf I make,
When eer I wake or Play.
And could I ever keep awake,
It would be always Day

With heavy Sighs I often hear You mourn my hopeless Woe. But fire with Patience I can bear A Loss I neer can know.

Then let not what I cannot have,
My Cheer of Mind destroy.
Whilst thus I Jing I am a King.
Altho a poor Blind Boy'



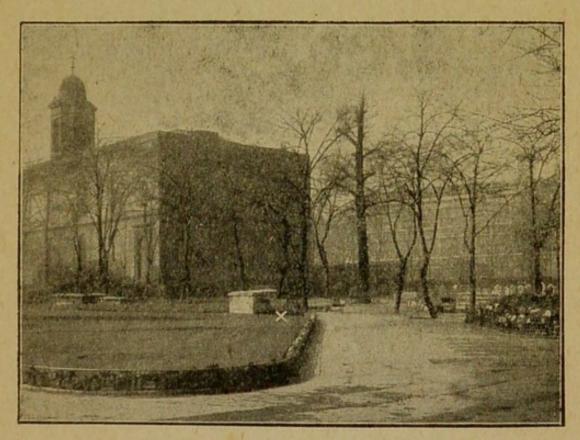
and intricate streets and passages of the city, and round and about the adjacent villages, the forerunners of the suburbs of to-day. The pupil also describes how his master used, in his hours of relaxation, to play all sorts of games, such as billiards, skittles, shuffle-board, and another game known as mississipie, and, keen and thorough in play as well as in more serious matters, he used to beat most of his opponents. "He played at whist," proceeds our chronicler, "with great readiness and judgment; each card was marked at the corner with the point of a needle, but the marks were so delicately fine as scarcely to be seen by any person not previously apprised of them. His 'hand' was generally the first arranged, and it was not uncommon for him to complain to the party that they were tedious in sorting their cards."

Stanley's keen hearing, and general alertness and adaptability of manner were extremely useful to him in social intercourse. It was said that on going into a room he could tell how many persons were in it immediately upon entering. After listening for a moment he could determine the position of each person in the room, and could direct his voice to each individual in turn, even to a stranger if he or she had spoken once. He could, too, soon detect the absence of anyone who was usually present. "If twenty people," wrote Alcock, "were seated at a table near him, he would address them all in regular order, without their situations being previously announced to him."

Of his musical ability—and Stanley was first and foremost a musician, loving his art with a deep and absorbing passion, devoting all his energies and all his life to its service—Burney, who was a competent

John Stanley

judge and an impartial critic, said, "He was a neat, pleasing, and accurate performer, a natural and agreeable composer, and an intelligent instructor." It was said, too, that he could accompany a song, or almost any musical composition, even if he had never previously heard it, thus anticipating the harmony before the chords were sounded. These improvised accompaniments were invariably sympathetic.



THE CHURCHYARD OF ST. ANDREW'S, HOLBORN

The cross shows where John Stanley was buried

Being a man of energy, and one who believed in keeping himself physically fit, Stanley was fond of outdoor recreation. One of his favourite forms of openair exercise, particularly in his later years, was horse-back riding. Towards the end of his life he went to live in peace and partial retirement at Epping, near the sylvan beauties of the forest. After a visit to

London, the busy scene of his former triumphs, he would often return, accompanied by a few friends, whom he would conduct by the pleasantest route, occasionally pausing by the way to point out the beauties of a distant view, or an agreeable woodland vista.

Stanley's last work as a composer was, in all probability, the setting to music of the Ode written by Warton for the King's birthday in 1786. The musician faithfully carried out his allotted part, but he did not live to hear the harmonies his brain had created, reproduced in their concrete and perfect form. He died at his house in Hatton Garden on 19th May, 1786, at the age of seventy-three, while his last composition was not produced until 4th June of that year.

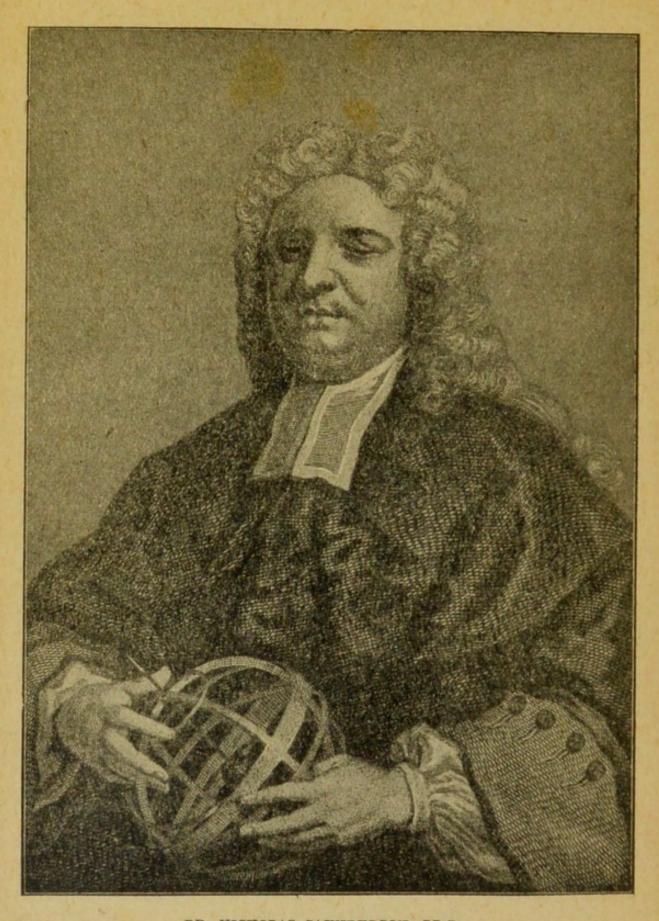
His remains were interred on the evening of 27th May in the then new burial ground of St. Andrew's, Holborn. On the following Sunday, instead of the usual voluntary, a solemn dirge, and—after service—"I know that my Redeemer liveth," were given "on that organ on which Mr. Stanley had with much eminence displayed his musical abilities near sixty

years."

Some years before his death Stanley had the privilege—one which was shared by many other eminent men of his time—of having his portrait painted by Gainsborough. This portrait was finely engraved by Mary Ann Scott (née Rigg). Another portrait of the composer, seated at the organ, was engraved by MacArdell, and appeared in the European Magazine for 1784. Other mementoes of Stanley are the original scores of his oratorios "Zimri" and "The Fall of Egypt," which are preserved at the Royal College of Music, London. His works, too, are still occasionally represented in organ recitals.

John Stanley

John Stanley has left a record of artistic achievement of which any musician might justifiably be proud, but as a prime mover in the direction of showing the possibilities of music as a profession for the blind, he lays special claim to our notice and regard.



DR. NICHOLAS SAUNDERSON, LL.D.

NICHOLAS SAUNDERSON, M.A., LL.D., F.R.S.

E would be an invincible and confirmed optimist who would consider blindness, not only as no very great deprivation, but as an absolute advantage, although Tully tells us that Democritus put out his eyes to enable him to think the more intensely. Nothing can compensate for the loss of a sense of such supreme value and importance as sight, which gives to us all the light and colour and perspective of life. But if a person unfortunately becomes incurably blind, it behoves him or her to seek for even slight alleviations or compensating advantages, and to make the most of them. One of these is certainly the facility which is afforded to mental concentration by the absence of the oftentimes distracting influence of things seen. If proof were needed of this, it can be found in the fact that when men wish to think intensely and undisturbedly, they instinctively and involuntarily close their eyes, the more readily to concentrate the mind on the matter under consideration, and to shut out exterior distractions.

It should follow, then, that blind people ought to excel in those studies and pursuits which require intense and concentrated thought. But this, of course, is taking too much for granted. Intellect is the prim-

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ary requisite, blindness may or may not be of secondary assistance. There have been blind men from time to time through the ages who have distinguished themselves in the realms of practical science and abstract thought. Tully says of his own master in philosophy, Diodorus, "That he exercised himself therein with more assiduity after he became blind; and what he thought next to impossible to be done without sight, that he professed geometry, describing his diagrams so expressly to his scholars that they could draw every line in its proper direction." St. Jerome relates an even more remarkable instance in Didymus of Alexandria, who, "though blind from his infancy, and therefore ignorant of the very letters, appeared so great a miracle to the world, as not only to learn logic but geometry also to perfection, which seems the most of anything to require the help of sight."

There have, too, been blind men in later years who have achieved distinction in the exact sciences. Notable amongst mathematicians in a mathematical age—the latter seventeenth century—was Nicholas Saunderson, who early displayed a wonderful natural genius for the mathematical sciences, notwithstanding the fact

that he was blind from earliest infancy.

Nicholas Saunderson was born at Thurlstone, near Penistone, Yorkshire, in January, 1682. He was only a year old when he contracted smallpox, and such were its ravages—preventive measures being then almost unknown—that it destroyed not only his sight, but the very eyeballs themselves. This calamity, occurring at so early an age, left him in the same mental and visual condition, to all intents and purposes, as if he had been born blind.

He grew up a bright and intelligent boy, and was

Nicholas Saunderson

sent to acquire the rudiments of education at Penistone free school. The "little Latin and less Greek" which he learned there he afterwards added to by his own studious energy, to such purpose that he was able to follow the works of Euclid, Archimedes, and Diophantes,

read in the original Greek.

His father, who was in the Excise service, helped him in his studies, both while he was at school and afterwards, when he continued them at home. As far as arithmetic was concerned, Nicholas showed extraordinary aptitude. He was able to perform long and intricate calculations mentally. Even without tuition he was able to discover the rules—or more remarkable still, to formulate his own rules—for most of the problems he set himself to solve.

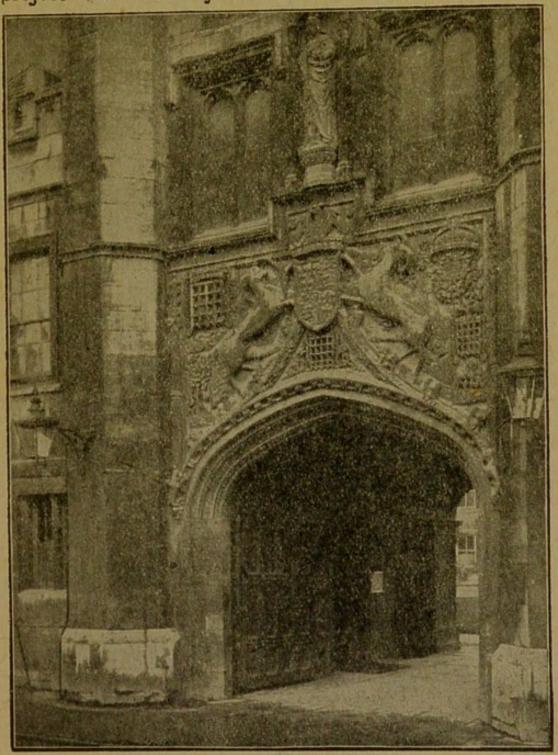
When Nicholas was a youth of about eighteen, he came under the notice of a Mr. Richard West, who was himself a capable mathematician. This gentleman was so much impressed with Saunderson's uncommon capacity that he resolved to help him, and took the trouble of initiating him into the principles of algebra and geometry. Soon afterwards the blind youth became acquainted with Dr. Nettleton, who assisted and encouraged him still further in his studies in the abstract mathematical sciences. Mr. West and Dr. Nettleton lent Saunderson books, and often read them and expounded them to him. He was then sent to a private academy at Attercliffe, near Sheffield. But the curriculum there devoted too much time to such subjects as logic and metaphysics to suit young Saunderson's tastes and inclinations. His talents were of a practical rather than of a philosophical order, so his stay at Sheffield was, in consequence, a comparatively short one.

Nicholas spent the next few years at home. He pursued his studies unremittingly, despite the absence of a tutor. Books and a reader were all that he required for his mathematical investigations. At length, however, his father, who, although he had in addition to his income as an exciseman, some little property, found that the burden of his numerous family strained his resources to the utmost. It became necessary therefore for Nicholas to try to do something for himself. He had once cherished dreams of going to Cambridge, but that seemed now to be out of the question. But dreams do sometimes come true, and his friends, knowing his wonderful grasp of the most abstruse branches of mathematics, and also believing that his lucidity of method in communicating his ideas would enable him to teach others, decided to send him to Cambridge, with a view of completing his studies, and afterwards of taking up tuition.

Accordingly, in the year 1707, Nicholas Saunderson, then twenty-five years of age, accompanied his friend Joshua Dunn, fellow-commoner of Christ's College, to Cambridge, where they lodged together. Saunderson was not admitted a member of the College or of the University, but he was generally treated with courtesy and respect, and soon became a familiar figure in the College precincts. The use of a chamber was allowed him, as also the full freedom of the College library. Meanwhile Dunn assiduously spread Saunderson's reputation as a mathematician. The latter worked hard, and hoped to be able to make a position for himself as a teacher. Mr. William Whiston was at that time Lucasian Professor of Mathematics at Cambridge, and for anyone else to teach or give lectures on that or cognate subjects might have been considered by him

Nicholas Saunderson

as an invasion of his privileges. But when Saunderson's project was tactfully broached to him, he made no



CHRIST'S COLLEGE, CAMBRIDGE

objections, and readily gave his consent in the case of such a peculiarly gifted and pathetically afflicted young man.

Saunderson lost no time in forming a class, which was attended by students from several Colleges, and soon became popular and crowded. In his lectures he expounded the Newtonian philosophy-hitherto caviare to the general, and only understanded of the most learned-with a clearness and lucidity calculated to make it intelligible even to the average careless undergraduate. It seemed to his contemporaries a marvellous thing that a blind man should lecture on Optics, the nature of light and colours, and be able to explain the theory of vision, but Newton's wonderful combination of intuition, logic and science, and Saunderson's own lucidity of mind were such that the latter contrived to make their meaning abundantly clear. It was in the natural order of things that so brilliant an exponent of the Newtonian philosophy should come under the notice of its originator, Sir Isaac Newton himself. Saunderson also made the acquaintance of such distinguished contemporary scientists as Halley, the discoverer of the famous comet, and Cotes.

Professor Whiston was relieved of his appointment in October, 1710. There were many candidates for the vacant post, but for mathematical ability Saunderson stood head and shoulders above all the rest. The University authorities were so impressed with his unique qualifications that, with a view to removing his technical disabilities, they applied to their Chancellor, the Duke of Somerset. His Grace approached Queen Anne in the matter, and secured a royal mandate conferring the degree of M.A. on Nicholas Saunderson.

In due course came the formal election, and this young, blind man, not yet thirty years of age, was on 20th November, 1711, "chosen (fourth Lucasian) Mathematick Professor." There was some opposition,

Nicholas Saunderson

but Saunderson had powerful and influential advocates; Sir Isaac Newton and others taking an active interest in the proceedings. At the inauguration ceremony in the following January the new Professor of Mathematics delivered an oration, which was, says a contemporary, "made in very elegant Latin, and a style truly Ciceronian." The newly-appointed professor devoted himself with energy and assiduity to his official duties, spending seven or eight hours a day in teaching alone.

Lord Chesterfield, who was at Trinity Hall in 1712, and the two following years, and who attended Saunderson's lectures, described him as a man who had lost the use of his own sight, but taught others to use theirs.

In the year 1719 our hero was made a Fellow of the Royal Society. He still resided in chambers at Christ's College, and, in fact, continued to do so until he was over forty years of age, when he took a house in Cambridge. Very shortly afterwards, in 1723, to be precise, he was quietly married; the lady of his choice being the daughter of the Rev. Mr. Dickens, Rector of Boxworth, a little village some eight miles from Cambridge. During their happy married life a son and a daughter were born to Mr. and Mrs. Saunderson.

The University of Cambridge was honoured by a visit from George II. in 1728. The King, having heard of the blind Professor, expressed a wish to see him. Saunderson attended His Majesty in the Senate House, and was accorded an audience. Immediately afterwards he was, at the King's behest, created Doctor of Laws.

Dr. Reid, a particular friend of Saunderson's, writes of the latter's scientific knowledge:—

"One who never saw the light may be learned and knowing in every science, even in optics, and may make discoveries in every branch of philosophy. He may understand as much as another man, not only of the order, distances, and motions of the heavenly bodies, but of the nature of light, and of the laws of the reflection and refraction of its rays. He may understand distinctly how these laws produce the phenomena of the rainbow, the prism, the camera obscura, the magic-lantern, and all the powers of the microscope and telescope. This is a fact sufficiently attested by experience. Dr. Saunderson understood the projection of the sphere, and the common rules of perspective, and if he did, he must have understood all that I have mentioned."

So much for Dr. Saunderson, the practical scientist and erudite mathematician, who considered mathematics as the key to philosophy. Let us now try to gain some idea of the blind man's personality. Unlike the conventional picture of the dry-as-dust professor, he had a strong sense of humour, was a witty and sprightly conversationalist, being generally considered as, colloquially speaking, good company. He was imbued with a love of truth that knew no compromise, and a hatred of duplicity which impelled him at all times and at all costs to speak his mind. He invariably expressed his sentiments and opinions on men and things with outspoken frankness and manifest sincerity. This somewhat blunt and uncompromising straightforwardness, however admirable a quality in itself, naturally raised Saunderson not a few enemies.

As is so frequently the case with blind people, Dr. Saunderson's sense of touch was very highly developed. It is related of him, on good authority,

Nicholas Saunderson

that on one occasion he was given a set of Roman medals, some of which were counterfeit, and by merely feeling them one by one, he was able to separate the genuine from the false; and this although the latter were such good imitations as to have actually deceived an expert by their appearance. He was known, too, when in a garden where observations of the sun were being taken, to take notice of every passing cloud. This he could only have done from his perception of the slight decrease in the heat of the sun's rays, for it must be remembered that he could have absolutely no consciousness of light or shade, his eyes having been completely destroyed.

It was said, too, that he could tell when any object was held near his face, or when he passed close to a tree or a building, "merely by the different impulse of the air upon his face." His hearing was equally acute. He knew and could recognise the various College courts and quadrangles by the ring of his footsteps upon the pavements. This delicacy of ear was of service to him in other ways. He was something of a musician, played the flute fairly well, and could, it is said, distinguish a difference of a fifth part of a tone.

Professor Saunderson was of an ingenious as well as a utilitarian turn of mind. He invented a practical method of performing the most intricate and complex arithmetical calculations, which he called his "Palpable Arithmetic." He had an abacus or calculating-table made, consisting of a thin, smooth board, slightly more than a foot square, raised on a framework so as to be hollow underneath. This board was drafted with two sets of lines, one-tenth of an inch apart, one set of lines intersecting the other at right-angles, thus dividing the board into numerous tiny squares of one-

tenth of an inch. At the intersecting point of every line the board was perforated to receive a pin. He used pins with two different kind of heads, and it was by means of these pins that he expressed his numbers and performed his calculations. John Colson, Saunderson's successor in the Professorship of Mathematics at Cambridge, describes the method of using this "Palpable Arithmetic" with a fulness of detail which would be out of place here. He wrote of Saunderson that he "could place and displace his pins with incredible nimbleness and facility, much to the pleasure and surprise of all the beholders; he could even break off in the middle of a calculation, and resume it when he pleased, and could presently know the position of it by only drawing his fingers gently over the table."

Saunderson's "Palpable Arithmetic" is worthy of special mention, not only as illustrating the practical bent of its blind inventor's mind, but also because of its value to such of his afflicted successors as wished to pursue the study of arithmetic and mathematics. In the Transactions of the French Academy, we find M. Diderot, in a letter to a feminine correspondent, referring to the invention in the following terms:—

"This Saunderson, madam, is an author deprived of sight, with whom it may not be foreign to our purpose to amuse you. They relate prodigies of him, and of these prodigies there is not one which his progress in the Belles Lettres and his mathematical attainments do not render credible. The same instrument served him for algebraical calculations, and for the construction of rectilineal figures. You would not perhaps be sorry that I should give you an explanation of it, if you thought your mind previously qualified to understand it; and you shall soon perceive that it presupposes no

Nicholas Saunderson

intellectual preparations of which you are not already mistress; and that it would be extremely useful to you, if you should ever be seized with the inclination of making long calculations by touch."

Notwithstanding the serious disadvantage of sightlessness under which he laboured, Saunderson was, as

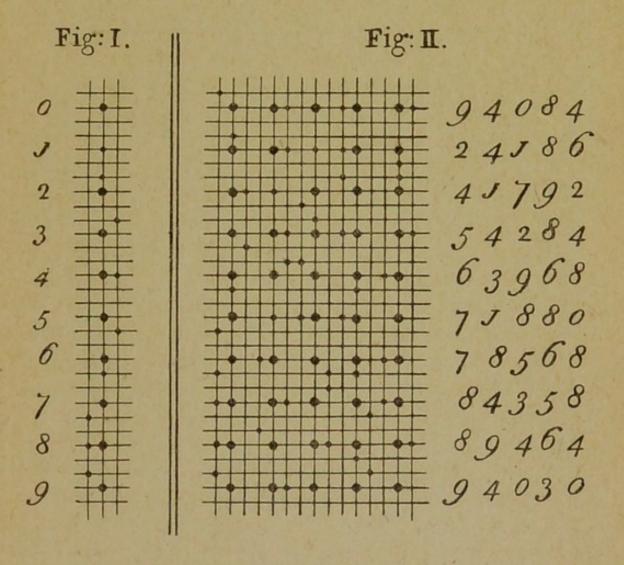


ILLUSTRATION OF SAUNDERSON'S "PALPABLE ARITHMETIC"

has been said, one of the ablest mathematicians in an age of scientists like Newton and Halley. The broadness of his intellectual range and grasp, the exactness of his ideas and correctness of his deductions, and the clearness and cogency of his methods in conveying them to others, all combined to make him undoubtedly the

most successful mathematical teacher of his time. His rare wealth of learning and his lucidity of mind are conspicuous in those lectures which have been preserved, and in his other writings, none of which he ever manifested any desire to publish.

Physically and constitutionally Dr. Saunderson was naturally strong and robust. But finding it difficult to take sufficient exercise, partly owing to his affliction, and partly to the exigencies and sedentary nature of his occupation, he latterly developed scorbutic tendencies. Early in the year 1739 he became conscious of a numbness in his limbs, and he shortly became a complete invalid. The disorder of his blood, following on scurvy, culminated in mortification of the foot. He was told that the end was near, and fell silent for a time; but he soon regained his accustomed cheerfulness and talked with much composure. Finally, on 19th April, 1739, he passed away, being then in the fifty-seventh year of his age. He was buried at his own request in the chancel of the parish church at Boxworth, his wife's native village.

Some time before his death Saunderson had been induced by his friends to prepare his "Elements of Algebra" for publication. Unfortunately he did not live until they were published. The work, to which was prefixed an introductory memoir, was issued in two volumes in 1740. Some of Saunderson's MSS. were printed in 1751 under the title of "The Method of Fluxions, etc., . . . also An Explanation of the Principal Propositions of Sir Isaac Newton's Philosophy."

Many of the blind Professor's manuscripts are still preserved in the University Library, Cambridge. The portrait on page 288 is from an oil painting by I. Vanderbanck, which bears the inscription, "Nicholas

Nicholas Saunderson

Saunderson, LL.D., F.R.S., Fourth Lucasian Professor of Mathematics." He is depicted holding an armillary sphere in his hand.

Edmund Burke, in his famous treatise "On the

Sublime and Beautiful," wrote of Sanderson :-

"This learned man had acquired great knowledge in natural philosophy, in astronomy, and whatever sciences depend upon mathematical skill. What was the most extraordinary . . . he gave excellent lectures on light and colours, and this man taught others the theories of those ideas which they had, and which he himself undoubtedly had not."

This remarkable commentary by one great man on the work of another is one of the greatest tributes that could be paid to Saunderson's ability. Whatever the explanation—whether it was the possession of innate ideas, or, as some would have us believe, merely the mastery of word-symbols devoid of any underlying reality—the fact remains that this man, blind from infancy, taught others to know and understand the meaning and significance and theory of much that they saw, and that he himself had never seen. If explanation of the phenomenon is still sought for, it may be found in the one word—genius!



JOHN MILTON

JOHN MILTON: AS A BLIND MAN

THE psychology of blindness is a new and fascinating and as yet practically unworked field of inquiry and research. But before any great advance can be made in the direction of forming generalisations and co-ordinating facts, it is indispensable that the greatest possible amount of information should be assembled, and if possible sifted and classified. Some of the most valuable material is to be found in the actual experiences of individuals. The lives of such men as John Milton are of perennial interest. Compared with human interest of their life story, the scientific consideration of such questions as to whether or not sightlessness cramps objective thought by doing away with visual suggestion, or on the other hand encourages subjective thought, pales into comparative insignificance.

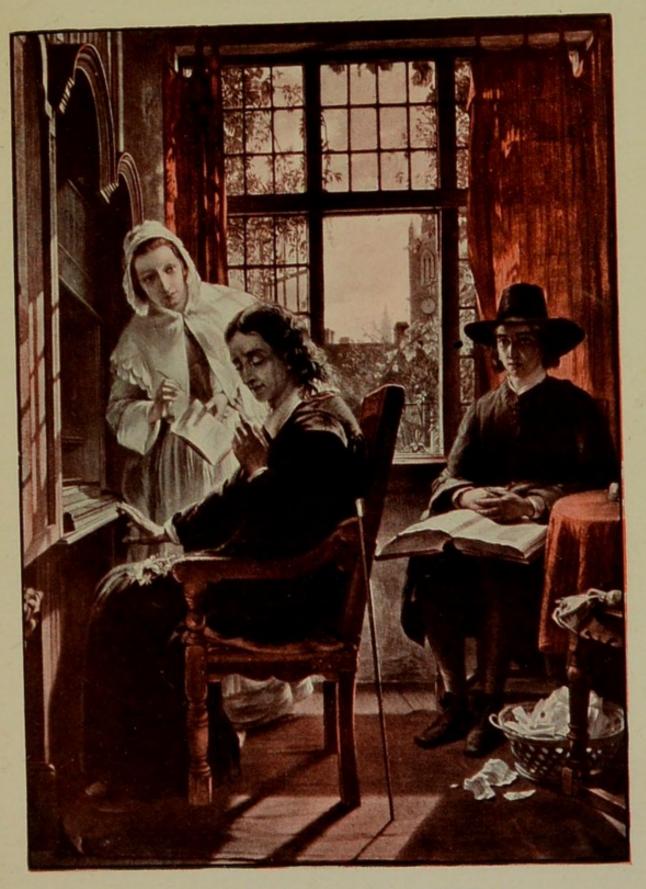
It is a fact not generally borne in mind that John Milton was blind when he wrote the greatest of English epics. He was blind for twenty-two years! His affliction, therefore, played no small part in his life. It can hardly be said to have had a cramping effect, for it was after he lost his sight that he gave to the world his most immortal work. The greatness of Milton's genius is admitted by all the world, and the surpassing

grandeur of his work can only be appreciated in proportion to the culture and mental range of his readers. It is not the purpose of the present writer to recapitulate the incidents of Milton's career, nor to essay the ambitious task of penning an appreciation of the genius of the greatest English writer since Shakespeare. Rather is it proposed to collect and collate facts about the loss of sight which afflicted Milton, its effect on him—first as a man, and secondly as a great poet.

We know that John Milton was the grandson of a Roman Catholic yeoman at Stanton St. John, near Oxford, and the son of a father disinherited for his Anglicanism. He was born in a room over the scrivener's office at the Sign of the Spread Eagle in Bread Street, Cheapside, on the 9th December, 1608. Thus, like Chaucer, Spenser, and Jonson, he was born within sound of Bow Bells. The child was father to the man, for he tells us in "Paradise Regained":—

"When I was yet a child, no childish play,
To me was pleasing; all my mind was set
Serious to learn and know, and thence to do
What might be public good; myself I thought
Born to that end, born to promote all truth,
All righteous things."

In early youth his avidity for knowledge was most marked. He says: "My father destined me while yet a little boy for the study of humane letters, which I seized with such eagerness that from the twelfth year of my age I scarce ever went from my lessons to bed before midnight, which, indeed, was the first cause of injury to my eyes." Aubrey, an observant contemporary of Milton's, confirms this: "When he was very young he studied very hard, and sate up very late,



MILTON COMPOSING "SAMSON AGONISTES."



John Milton

commonly till twelve or one o'clock at night; and his father ordered the maid to sit up for him." There can be no doubt that this excessive studiousness in

early youth permanently affected his eyesight.

Then came his schooldays at St. Paul's, the tutorship of Thomas Young, and latterly the peaceful days at Cambridge, when this slim youth with the oval face, the long light brown hair and the dark grey eyes, with the gentle manners and the serious, not to say prudish, code of conduct, was known as "the lady of Christ's."

After leaving college, in 1631, Milton says in his Defensio Secunda: "At my father's country residence, whither he had retired to pass his old age, I, with every advantage of leisure, spent a complete holiday in turning over the Greek and Latin writers." There he wrote the twin idylls, "L'Allegro," and "Il Penseroso," and the masque "Comus." He dedicated his life to the literary vocation, when he said: "He who would not be frustrate of his hope to write well hereafter in laudable things, ought himself to be 'a true poem." He proceeds: "Having passed five years in this manner, after my mother's death, I, being desirous of seeing foreign lands, and especially Italy, went abroad with one servant, having by entreaty obtained my father's consent."

He left England in 1638, and first went to Paris, where he visited the celebrated Hugo Grotius, then Swedish Ambassador to the Court of the French King. In Italy, the Mecca of literati, of artist, and of dreamer alike, the English poet was well received. Notwithstanding his political and religious opinions he was cordially welcomed by Cardinal Barberini (afterwards Pope Urban VIII.) and Manso, Marquis of Villa, the

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aged erstwhile patron of Tasso. But Milton's meeting with Galileo at his villa near Florence, was, in the light of after events, the most significant in his travels. The old astronomer was then (August-September, 1638) a pathetic figure, aged and sightless. There is a reference in the Areopagitica to "the famous Galileo grown old, a prisoner to the Inquisition." Professor Masson observes that to Milton "there seems to have been a certain fascination of the fancy, as if by unconscious presentment, on the topic of blindness." Again he says: "The sight of Galileo, frail and blind, was one which he never forgot." Thus we find the "Tuscan artist" or astronomer mentioned (in the description of Satan's shield) in "Paradise Lost":—

"The broad circumference
Hung on his shoulders like the moon, whose orb
Through optic glass the Tuscan artist views
At evening from the top of Fiesole
Or in Valdarno, to descry new lands,
Rivers and mountains in her spotty globe."

Abandoning his original intention of visiting Sicily and Greece, Milton returned home by way of Geneva in June, 1639. On his arrival in London he turned his abilities to teaching. Lady Ranelagh's son and nephew, Henry Lawrence and Cyriac Skinner—afterwards his bosom friends—were amongst his pupils. In 1643, at the age of thirty-eight, Milton married Mary, eldest daughter of Richard Powell, a Royalist gentleman of Oxford. There has been much controversy over the marriage; many writers have said that the poet endowed his homely young wife with imaginary and poetic attributes which she never possessed. Be that as it may, it is significant that his wife, at her own request, was allowed by him to return to her parents. She did not

John Milton

come back to him for two years. In the meantime he wrote a pamphlet on "The Doctrine and Discipline of Divorce." Mary Milton died in 1652, after having borne her husband four children.

The mental isolation in which Milton lived was one of the most notable features of his life. He was not unsociable, nor had he a hard or very austere nature, but he was proud, reserved, and self-contained. A man of rare erudition and uncommon culture, he had fixed ideas which made a barrier between him and most of the people with whom he came into contact. He had all the sensitiveness of the poetic nature, but was not adaptable, and did not readily associate with his contemporaries. To young people, however, he was kind and affable, and his daughter, Deborah, has left it on record that he was the life and soul of a circle of friends whom he entertained with an unaffected cheerfulness and courtesy.

The heyday of Milton's political activity was now approaching. From 1640 onwards for nearly twenty years he abandoned what he felt to be his true vocation in life, poesy, for which he had undergone such a magnificent preparation, to take up the cudgels, or rather the pen, in partisan strife, and to support Puritanism with all the might of his powerful advocacy. His pamphlets are monuments of stately English, although their interest from a literary point of view is now largely problematical; and in addition to this, he took no pains as regards their construction.

Milton was appointed Secretary of Foreign Tongues in March 1648-49, and generally undertook the task of translating the State letters to foreign powers into Latin. He was requested by the Council of State to

write many pamphlets in reply to others, notably his Eikonoklastes in answer to the famous "Eikon Basilike."

For some years Milton had been having trouble with his eyes, which had never been strong. He had constant headaches; he was, as we know, addicted to late study, and his nephew, Phillips, tells us that he was continually tinkering with physics to preserve his sight. Accordingly, in the light of our later knowledge, it is not to be wondered at, that about the time (1650) he was writing his "Defence of the English People," a reply to the Defensio Regia of Salmasius, he lost the sight of his left eye. His physician warned him that if he persisted in using the remaining eye for reading or writing he would lose that too. "The choice lay before me," Milton writes, in the Defensio Secunda, "between dereliction of a supreme duty and loss of eyesight. In such a case I would not have listened to the voice even of Æsculapius himself from the shrine of Epidaurus, in preference to the suggestion of the heavenly monitor within my breast, I knew not what, that spake to me from heaven. I considered with myself that many had purchased less good with worse ill, as they who give their lives to reap only glory, and I thereupon concluded to employ the little remaining eyesight I was to enjoy in doing this, the greatest service to the common weal it was in my power to render." He was thanked by the Council for his services in silencing Salmasius, but no thanks could recompense him for the loss of sight he had sustained.

Even before 1649 he had occasionally employed amanuenses, principal among whom was his nephew, John Phillips, whom he had educated himself, and who lived with him in his house in Petty France.

John Milton

At length, about the early part of the year 1652 (March or April, according to Masson), that paralysing calamity of total loss of sight fell in all its awful meaning upon the great man. At the age of forty-three, he was in total oblivion. Blindness, one of the most poignant deprivations which afflict humanity, falls more heavily upon the author or poet, to whom books are a sine quanon. It shuts out the student or the savant from direct access to the sources of knowledge. The specific disease which attacked Milton cannot be gathered from the account he has given of it. In the well-known passage of "Paradise Lost," iii. 25, he does not definitely point out either amaurosis ("drop serene") or cataract ("suffusion"):—

"So thick a drop serene hath quenched their orbs, Or dim suffusion veiled."

A physician, referred to by Professor Alfred Stern, tells us that some of his symptoms were more like glaucoma. It was characteristic of the true and æsthetic artist that even his blindness did not lower his self-respect concerning his outer man. His enemies jeered about "the lack-lustre eye, guttering with prevalent rheum," and the taunt stung him. In his "Second Defence," Milton informs the public that his eyes are externally uninjured. "They shine with an unclouded light, just like the eyes of one whose vision is perfect. This is the only point in which I am, against my will, a hypocrite." A still more spirited and beautiful vindication appears again in those memorable and well-known lines in "Sonnet XIX." to Cyriac Skinner:—

"Cyriac, this three-years'-day these eyes, though clear To outward view of blemish or of spot, Bereft of light, their seeing have forgot; Nor to their idle orbs doth sight appear

Of sun, or moon, or star throughout the year!
Or man, or woman,—Yet I argue not
Against Heaven's hand, or will, nor bate a jot
Of heart, or hope, but still bear up and steer
Right onward. What supports me, dost thou ask?
The conscience, friend, to have lost them, overplied
In Liberty's defence, my noble task,
Of which all Europe rings from side to side:
This thought might lead me through the world's vain mask,
Content, though blind, had I no other guide."

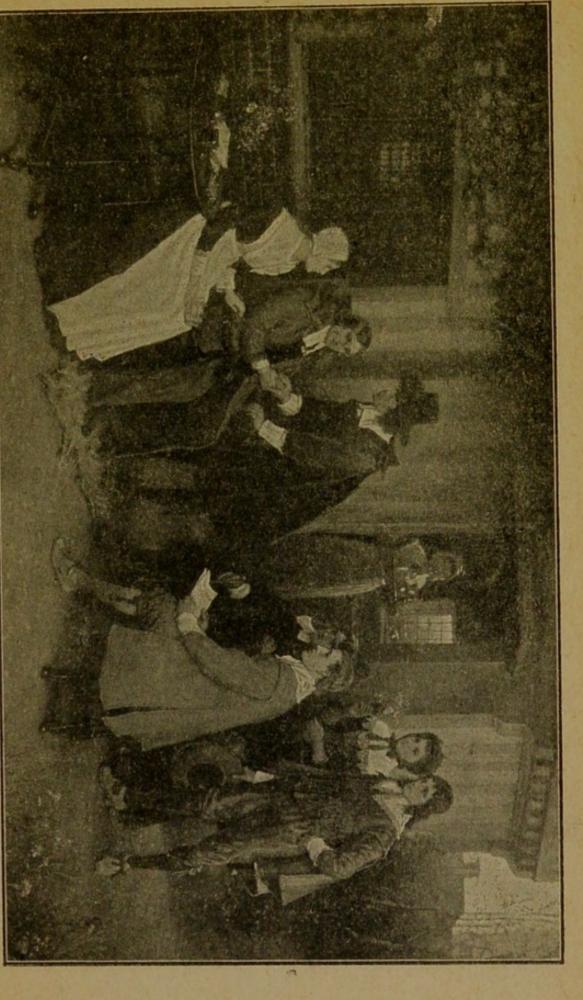
Long afterwards, when the exordium of Book III. of "Paradise Lost" was written, in the sad recital of his blindness, this slight touch of egotism disappears as not being in keeping with the solemn dignity of the context.

In the year 1652 the promising young poet, Andrew Marvell, came under Milton's notice. They rapidly became fast friends, and Milton brought Marvell's capabilities to the notice of members of the Council.

Some of Milton's enemies had the baseness to allege that his blindness was by way of being a judgment upon him. In a fine passage of his "Second Defence for the People of England," he voices his resentment and indignation:—

"I wish," he commences, "that I could with equal facility refute what my barbarous opponent has said of my blindness; but I cannot do it, and I must submit to the affliction. It is not so wretched to be blind, as it is not to be capable of enduring blindness."

But his resentment is tempered with resignation. He goes on to say: "But why should I not endure a misfortune which it behoves everyone to be prepared to endure if it should happen; which may, in the common course of things, happen to any man, and which has been known to have happened to the most



THE MEETING OF MILTON AND ANDREW MARVELL

[By G. H. Boughton, R.A.

distinguished and virtuous persons in history? What is reported of the 'Augur Tiresias' is well known; of whom Apollonius sings thus in his 'Argonautica':—

"To men he dared the will divine disclose,
Nor feared what Jove might in his wrath impose.
The gods assigned him age without decay,
But snatch'd the blessing of his sight away."

Again, further on, he descends to the cold anger of his pamphleteering prose style: "But if the choice were necessary I would, sir, prefer my blindness to yours; yours is a cloud spread over the mind, which darkens both the light of reason and of conscience; mine keeps from my view only the coloured surfaces of things, while it leaves me at liberty to contemplate the beauty and stability of virtue and truth. How many things are there besides which I would not willingly see; how many which I must see against my will; and how few which I feel any anxiety to see."

It would appear on the face of it as if Milton himself saw most clearly with the eye of his bright and ardent spirit after he lost his bodily sight. It was then, at least, that he seemed to see most clearly the importance and the necessity of completing, before old age overtook him, that magnum opus which had (in embryo) been dimly floating in his master mind for years. Now, at last, he was to put to its proper use the incomparable training he had received in his youth, to be true to the vocation he had chosen.

The poet, in the autumn of the year 1654, wrote to Leonard Philaras, of Athens, Ambassador from the Duke of Parma to the King of France, a long and detailed account of his blindness and its symptoms, as follows:—"When I was known to you by writings only, and widely separated in our abodes, I was first

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honoured by your kind correspondence; and afterwards, when an unexpected occasion brought you to London, with the same kindness you came to see me, who could see nobody; one labouring under an affliction which can entitle him to little observation, and may perhaps expose him to much disregard. As, however, you entreat me not to abandon all hopes of recovering my sight, and state that you have a medical friend at Paris (M. Thevenot) particularly eminent as an oculist, whom you could consult upon the subject, if I would transmit to you the causes and the symptoms of my disease; that I may not seem to neglect any means, perhaps divinely suggested, of relief, I will hasten to comply with your requisition. It is now, I think, about ten years since I first perceived my sight to grow weak and dim, and at the same time my spleen and other viscera heavy and flatulent. When I sat down to read, as usual in the morning, my eyes gave me considerable pain, and refused their office till fortified by moderate exercise of body. If I looked at a candle it appeared surrounded with an iris. In a little time a darkness covering the left side of the left eye (which was partially clouded some years before the other) intercepted the view of all things in that direction. Objects also in front seemed to dwindle in size whenever I closed my right eye. This eye, too, for three years gradually failing, a few months previous to my total blindness, while I was perfectly stationary, everything seemed to swing backward and forward; and now, thick vapours appear to settle on my forehead and temples, which weigh down my eyelids with an oppressive sense of drowsiness.

"I ought not, however, to omit mentioning that before I wholly lost my sight, as soon as I lay down in

bed, and turned on either side, brilliant flashes of light used to issue from my closed eyes, and afterwards on the gradual failure of my powers of vision, colours proportionally dim and faint seemed to rush out with a degree of vehemence, and a kind of noise. These have now faded into uniform blackness, such as ensues on the extinction of a candle; or blackness only varied and intermingled with dunnish grey. The constant darkness, however, in which I live day and night, inclines more to a whitish than to a blackish tinge; and the eye turning round, admits as through a narrow chink a very small portion of light. But this, though perhaps it may offer a small glimpse of hope to the physician, does not prevent me from making up my mind to my case, as one evidently beyond the hope of cure; and I often reflect that, as many days of darkness, according to the wise men, are allotted to us all, mine (which by the favour of the Deity are divided between leisure and study) are recreated by the conversation and intercourse of my friends, and far more agreeable than those deadly shades of which Solomon is speaking; but if, as it is written, 'Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God,' why should not each of us likewise acquiesce in the reflection that he derives the benefit of sight not from his eyes alone, but from the guidance and providence of the same Supreme Being? Whilst He looks out and provides for as He does, and leads me about as it were, with His hand, through the paths of life, I willingly surrender my own faculty of vision, in conformity to His good pleasure, and with a heart as strong and steadfast as if I were a Lynceus. I bid you, my Philaras, farewell."

In 1656, Milton married Catherine Woodcock, his

John Milton

second wife, who only lived about fifteen months afterwards. It was not until 1657 that Andrew Marvell became Milton's assistant in the State secretaryship. In the following year Milton is supposed to have taken up the task of composition of "Paradise Lost" continuously.

With the Restoration he lost his Latin secretaryship, and was involved in the ruin of his party. He lost three-fourths of his small fortune (about £2000). Thus, about the time of the Restoration (1660), he was left with three little girls, and a third marriage seemed necessary if only to provide the little ones with a loving second mother. Dr. Paget, Milton's friend, upon being consulted, recommended Elizabeth Minshull, of Nantwich. Accordingly she and the poet were married in 1663, and for the last decade or so of his life the poet was well cared for. Aubrey says she was "a gent (genteel?) person (of) a peaceful and agreeable humour." On the other hand, Newton Bishop of Bristol, who wrote in 1749, had heard that she was "a woman of a most violent spirit and a hard mother to his children." But in his later years he was heard to say to her: "God have mercy, Betty, I see thou wilt perform according to thy promise, in providing me such dishes as I think fit while I live, and when I die thou knowest I have left thee all." His daughters' education had been neglected. They found the work as amanuenses and readers irksome, and they openly rebelled. A young Quaker named Ellwood came to read Latin to him every afternoon except Sunday.

The house in which Milton lived from his last marriage until his death was one in a then new row facing the Artillery Ground, on the site of the west side of what is now called Bunhill Row. This is the house which must be associated with the poet

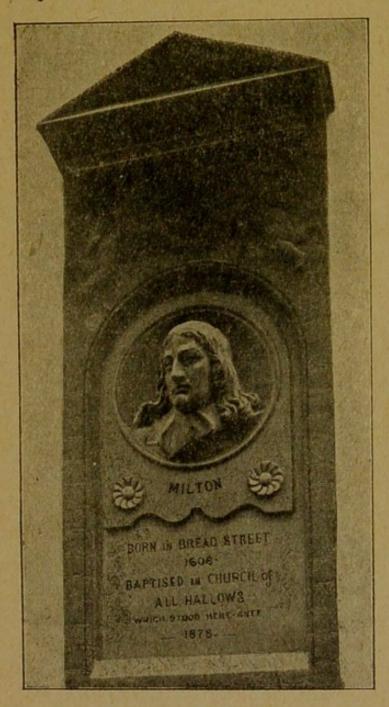
of "Paradise Lost," as it was here the poem was in part written, and wholly revised and finished. But the Bunhill Row house is gone now—every trace of it has long been destroyed.

It was here that "an ancient clergyman of Dorset-shire, Dr. Wright, found John Milton in a small chamber, hung with rusty green, sitting in an elbow chair, and dressed neatly in black; pale, but not cadaverous, his hands and fingers gouty and with chalk stones." At the door of this house, sitting in the sun, looking out upon the Artillery Ground, "in a grey coarse cloth coat," he would receive his visitors. On colder days he would walk for three or four hours at a time in his garden. A garden was an indispensable adjunct to every house he lived in.

After Milton lost his sight, he stopped the habit of late study, and retired to rest at nine. He divided his time judiciously and well. In summer he rose at four, in winter at five. First of all, he had the Hebrew Scriptures read to him. "Then he contemplated. At seven his man came to him again, and then read to him, and wrote, till dinner. The writing was as much as the reading."—(Aubrey.) He could not entirely dispense with exercise; he either walked in the garden, as we have said, or swung in a sort of machine. Music was his only recreation besides conversation. He played both organ and bass viol, the former chiefly. Sometimes he would sing himself, or ask his wife to sing to him. Then he went up to his study to be read to until six o'clock. After six, his friends were allowed to see him, and he would sit with them until eight. At eight he sat down to a light supper, usually olives. He was extremely abstemious in his food, being subject to a gouty diathesis. After eating sparingly, he smoked a

John Milton

pipe of tobacco, drank a glass of water, and went to bed. He was careful in his use of wine; but, says Aubrey: "He was very cheerful in his gouty fits, and sang."



IN MEMORY OF MILTON

This table is inserted in the building now on the site of All Hallow's Church

Milton was partial to composition in bed. The warmth and reclining position were congenial and comforting. The poetic muse was not, however, sub-

servient to his will. At times he would lie awake all night, trying in vain to compose. At other times, the "divine afflatus" caused his verse to pour forth "with a certain impetus and æstro." His vein, he said, flowed only from the vernal to the autumnal equinox. The spring brought back to Milton, as it did to many other poets, the buoyancy and inspiration necessary to composition. The result of his nocturnal communings he dictated during the day, "sitting obliquely in an elbow chair, with his leg thrown over the arm." He would give out forty lines as it were in a breath, and then reduce them to half the number.

Such are some of the most striking and pathetic glimpses of the great poet in the days of his blindness, bequeathed to us by his contemporaries.

And now we come to the poet's masterpiece, that wonderful, glorious epic, "Paradise Lost." Milton had, consciously or unconsciously, been serving an invaluable and unparalleled apprenticeship. After many vicissitudes of fortune, he was thrown back (refusing, however, to "bate one jot of heart or hope") upon the splendid resources of his own grand and lonely genius. He at length neared his goal and set himself to the accomplishment of his life-work. As we see in the jottings made in 1640, preserved at Trinity College, Cambridge, Milton's mind was permeated with the theme so far back as that year. He had written a few tentative or experimental lines in 1642. It was not until 1658 that he took up the task of composition continuously. If we may trust Aubrey Phillips, he had finished it in 1663. Finally re-writing and copying would occupy some time after the poem was practically finished.

In 1665, the year of the Great Plague, we first hear of "Paradise Lost" in a complete state. Everyone who

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could, fled from the city of contagion, disease, and death. Milton applied to his young friend Ellwood to find him a shelter. Ellwood, who was then living as tutor in the house of the Penningtons, took a cottage for Milton in their neighbourhood at Chalfont St. Giles, Bucks. That the Chalfont cottage "was not pleasantly situated" must have been indifferent to the old blind man, the more so as that the immediate neighbourhood, with its heaths and wooded uplands, reproduced the scenery he had loved when he wrote "L'Allegro."

In these peaceful surroundings Milton commenced his second great work, "Paradise Regained," in that same year, 1665. It is generally admitted that "Paradise Regained," although undoubtedly a great work, hardly reaches the level of his masterpiece, "Paradise Lost." In the second work, chronologically speaking, the poetic fire and inspiration of the first is lacking. Such was Milton's perseverance and industry that within a couple of years—that is, by the end of 1667—he had completed not only "Paradise Regained," but that great dramatic poem, Samson Agonistes which was performed as part of the celebration of the tercentenary of his birth in 1908.

Gradually, however, it must have become clear to Milton that his hour of inspiration had passed away, but with marvellous adhesiveness he devoted himself to the completion of several works which had remained unfinished from his earlier years. He published in 1669 a Latin Grammar, and this was followed by his "History of Britain," which appeared in the following year, and a volume on Logic, which saw the light in 1672. Then in 1673 came a new edition of an early volume of "Poems," and in the same year he reverted to his old habit of writing tracts by issuing one entitled

"Of True Religion, Heresy, Schism, Toleration." But even the invincible determination of Milton, now an old man and handicapped by blindness, could not enable him to continue this period of marvellous industry indefinitely. It was while he was preparing his Compendium of Theology for the press in 1674 that death overtook him. In the peculiar terminology of the time, Milton died of the "gout struck in," when he was sixty-six years of age.

It is interesting to note that Milton's "Treatise of Christian Doctrine," which at the time of his death was only one-third finished, and fell into the hands of Daniel Skinner, nephew of Cyriac, was given up by him to the Government. The Secretary of State, Sir Joseph Williamson, when he retired in 1678, left the MSS. behind him, and nothing further was heard of it until 145 years later, in 1823, when it was found in a cupboard in the State Paper Office.

Milton's most enduring monument is his work, just as his most fitting epitaph is to be found in the "Samson" he himself created:—

"Nothing is here for tears, nothing to wail,
Or knock the breath; no weakness, no contempt,
Dispraise nor blame, nothing but well and fair,
And what may quiet us in a death so noble."

The inspired words surely of one who, though sightless, was a seer and a prophet. The world, it seemed, would never again see his peer. Among the classic heroes of that darkness which is the kingdom of the blind, Milton stands pre-eminent.

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