

founded by the juvenile blind. (I use that term always to distinguish those who lose their sight in infancy).

The state institution for the blind in Ohio was founded by Mr. Penniman; in Tennessee by Messrs. Champlin and Sturtevant; in Mississippi by Mr. Champlin; Indiana by Mr. Churchman; Illinois, Samuel Bacon; Wisconsin, Mr. Churchman; Missouri, Mr. Whelan; Louisiana, Mr. Lane; Georgia, Mr. Fortescue; Maryland, Mr. Loughery; Iowa, Samuel Bacon; Nebraska, Samuel Bacon—this is the same gentleman who now living on his stock farm at Nebraska City to whom I have referred; the California Home for the Adult Blind was created practically by Joseph Sanders, and the Novia Scotia home was founded by Mary Dwyer. All of these founders and benefactors belong to the juvenile blind class.

In the United States sixteen persons of that class had achieved great success as superintendents of these places up to 1878, and since that date many have been added to the list, including Mr. Sanders in California.

Besides these public or state institutions, there are many others of a private or only quasi public character, run exclusively by blind men. The greatest of these and one of the greatest in the world is Hall's institution in Philadelphia. His great product is brooms. By my last report from him he had just bought seven hundred tons of broom corn, to be manufactured by his blind handicraftsmen this winter. His shops and markets have been continually increased and extended for years, though he is in competition with some of the largest broom shops in the world, and with cheap labor and prison labor.

The blind men in the California Home for the Adult Blind in Oakland were taught their trades by Joseph Sanders, who came to this state from Mr. Hall's establishment in Philadelphia. He is an excellent example of the thoroughly trained and naturally able juvenile blind. He is an expert swimmer and fisherman, uses no cane in walking, is a keen and adroit business man and a skillful mechanic. The California Adult Blind Home during his superintendency took front rank, its earnings paid into the state treasury averaging during his entire incumbency \$1,646 per month. He succeeded two seeing superintendents, and, with an increase of only 17 per cent in his shop force, increased the monthly earnings of the home 116 per cent and the wages per hand of the blind workmen 46 per cent.

As a teacher and superintendent it is probable that he has had few peers among the blind, and as merchant, business man and manufacturer, many who are not handicapped by the loss of any of their senses might sit at his feet and learn. When he left the institution in December, 1895, it had an export trade in brooms to Central America, Australia,

Hawaii and British Columbia, and the demand for its product was so great that the blind mechanics were working overtime to supply it. Then a visitor could have the singular and interesting experience of going into a large shop at night, unlighted, and occupied by nearly sixty mechanics, whistling at their work, while the hum and bustle of busy industry rose out of the dark.

To judge of the difficulty of teaching a trade to the adult blind, one must reflect that but few men think themselves capable of learning a new handicraft after they have passed their twenty-fifth year, and fewer still attempt it, though in possession of all their faculties. Now take men of that age, and upward, suddenly deprived of their sight, and fancy the skill and patience and kindness that must be used in taking them by their fingers and teaching them a trade by palpitation, without the use of the eye!

I have seen blind men stand at the broom clamp, weeping sorely in their helplessness, and crying their unbelief in their capacity to learn the trade. And I have seen this patient, blind teacher day after day encourage them, until the brain at last took control of the clumsy hand and it acquired a finer touch, and tears were dried, hope lighted the sad face, and it seemed verily that their path was blessed and had led them in darkness to a world where there was no more sorrow, nor crying, nor pain, and all tears were wiped away.

There came to him in that institution a deaf and dumb and blind boy, the child of a dependent widow. As he grew older and grew dearer to her heart, for our best affections go to the little ones and helpless in our homes, he taxed her forlorn resources more and more. Mr. Sanders took him to the shop. No word of instruction could pass the ears of the lad, for he lived in a world of everlasting silence and darkness.

Touch was the sole means of reaching him.

Patiently, by putting a head of broom corn in his hand and then a broom in process of manufacture, and then a finished broom, the idea was made to come to him that the complete article was made by putting together the single heads of material. So, day after day, the lesson went on, until the boy could build a broom.

To such a child this instruction and the knowledge it imparted was all that a university education is to a lad with all his senses. He became a most expert workman, and, when he had so progressed as to receive wages, he was not long in grasping the idea of what they meant, that it was some thing given for his labor and exchangeable for what he wanted.

Now, witness the high principle in that apparently hapless, hopeless, helpless child! He was miserly in saving his money. In handling him Mr. San-

ders had learned, by a manual code, to communicate with him, to exchange thoughts—in fine, the blind could talk to the blind and deaf and mute.

The boy one day told his teacher that he wanted to buy a broom machine. It was bought with his carefully hoarded money, and he set it up at home, bought corn, made brooms and sold them and contributed to the support of his mother and himself! Only a few centuries ago if a blind man had done this for a deaf and dumb and blind boy he would have been either saluted as a saint, inspired to work miracles by the powers of light, or sacrificed as a wizard in league with the powers of darkness.

It was a work worthy to rank with the training of Laura Bridgman by Dr. Howe, and taken with his capacity for all the duties of his position, placed Mr. Sanders in the same rank as Fasset, the blind postmaster-general of Great Britain, and Herreshoff, the sightless architect of the cup-defending yacht.

He had taken from the widow her burden and changed it into her support.

The strong and great, the conquerors who have ridden in triumph, and the winners of the glory of this world, finally go the mortal way that must be taken by the small and weak; and if there be somewhere an accounting and some time a day of reckoning, who has been so proud and high in this brief span, which is the common lot, that he would not then gladly exchange all his glory for this one deed of a patient blind man recorded in that state hoped for, in which Bartimeus walks without a guide and the lame and halt put off their weakness and stand upright?

Mr. Emil Braun, in the Baker's Review, tells his

readers, the bakers, all about the origin of sugar. The article is herewith appended:

“Who invented or discovered sugar?” is a question that was recently asked in Germany, and the answer was given that sugar has been known since the dawn of history, but not in all countries. The Chinese appear to have delighted their palate with sugar for more than 3,000 years, and it was known in India earlier than in Europe, being made from a juicy reed or cane. One of Alexander the Great's generals carried sugar to Greece in the year 325 B. C., as Sir Walter Raleigh, some 2,000 years later, carried tobacco from Virginia to England. But even so late as 150 A. D. sugar was still a rarity in Greece. The famous physician, Galen, used it as a remedy for certain maladies. Recent experiments show that sugar has remarkable sustaining power when eaten by those undergoing great fatigue. The invention of the first process for refining sugar is ascribed to the Arabs, and a Venetian merchant is said to have purchased the secret from them and introduced the process in Italy.”