

Biography

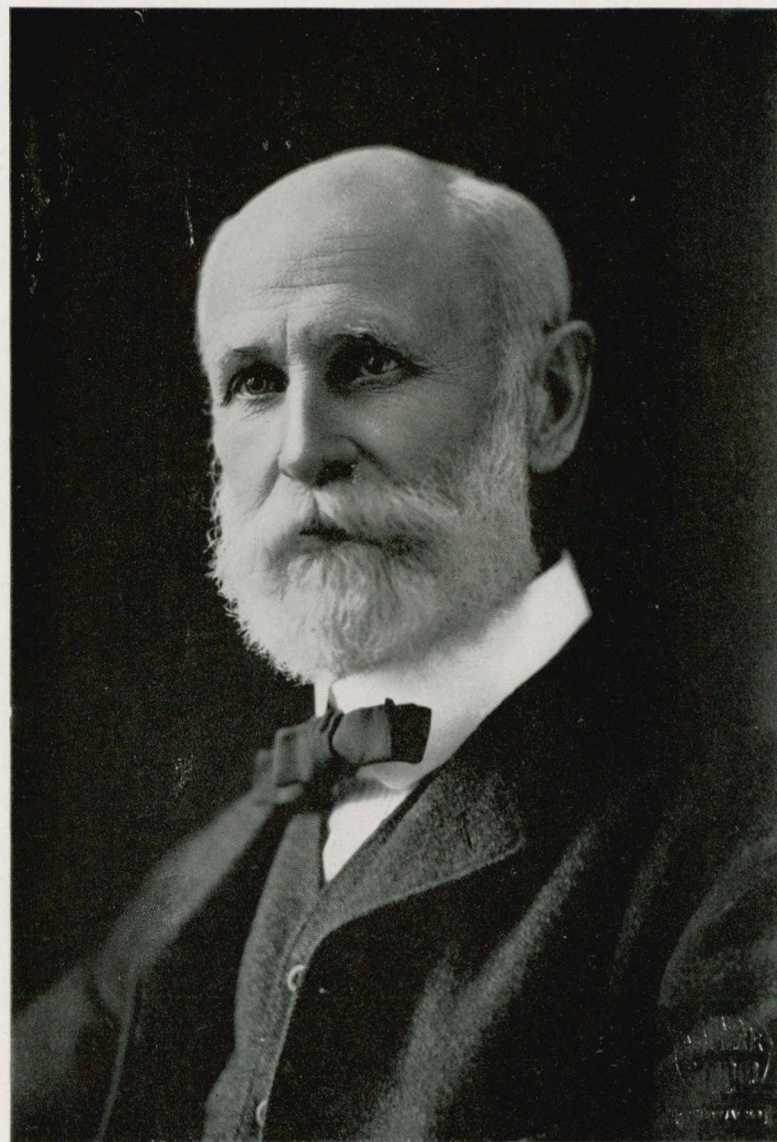
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Greene Yardiman Black



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G. V. BLACK, M. D., D. D. S., Sc. D., LL. D.

GREENE VARDIMAN BLACK.

By Charles E. Bentley, D. D. S., Chicago, Ill.

CIVILIZATION may be called a progressive endless chain of the achievements and contributions of the individual. It is the organized group which makes progress possible, it is true, but the originators, the idea givers, the innovators, are the real factors in the upward trend of life. A man makes his contribution, the chain is lengthened more or less, and he passes on to make room for another. What shall be said of the man, Greene Vardiman Black, who by the sincere, self-devoted, unselfish work of half a century has forged in the chain of modern civilization a link so perfectly executed, so unrivalled in workmanship that the hand which takes up what he laid down must have a cunning and strength not yet perceived in any of his contemporaries; and that link so beautifully fashioned—if we may continue our figure—is so long that it stretches far into the future and it is so well made that many years may elapse before the All-wise sends another to extend the work of this, His “good and faithful servant.”

Much has been said and written of Dr. Black since his passing away at Walnut Lodge, his boyhood home, on August 31st. The note of love for the man has been as pronounced as is the admiration and deep respect for the teacher and scholar. To an unusual extent Dr. Black was well beloved. He was great in achievements, and

great, also, in his simplicity and sincerity. For this men love him. He climbed the heights, but he took his fellows with him every step of the way. For this the gratitude of men will follow him for many days.

On a quiet little farm in Illinois, Dr. Black was born in 1836. The hard life of a Western farm is a good training station for a strong manhood, and even in childhood days Dr. Black acquired the habits of persistent labor which meant so much in his after development. It was during these younger days, also, that hunting in the great forest gave him that intense love for and intimacy with nature which so influenced his after inclinations in life and filled him with love which ended only with his death—for his last low whispered words were, “Trees, Flowers, Sky.”

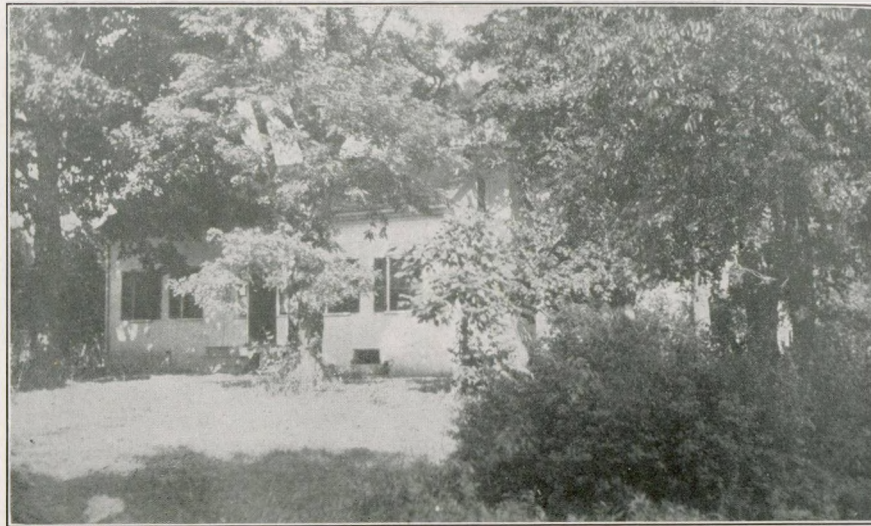
When Dr. Black was but seventeen years of age, he began the study of medicine, and pursued this work with his usual thoroughness for three years. Meanwhile he developed a decided skill for mechanics, a trait possibly inherited from his father, who in a crude way was of quite a scientific turn. His love for mechanical work was possibly the motive power which directed Dr. Black into the study of dentistry, which he took up after his medical studies.

To know the rise and development of dentistry one need go no further than the life of Dr. Black.

He found it at the stage of mere manual labor, the extraction of teeth; he left it one of the world's greatest sciences to which pathology, materia medica, bacteriology and surgery are necessary equipments, and no one man was more potent than he in starting the profession on its upward trend.

Dr. Black is widely known for his scientific books and papers. Always a prolific writer, his works

the Illinois State Dental Society and published in 1869 in the Missouri Dental Journal. In this paper Dr. Black reported a series of experiments which demonstrated the conditions controlling the cohesive property of gold foil, so that all uncertainty in the welding was removed. It was shown that certain gases gathered on the surface of the gold, forming an adherent film that prevented cohesion.



Old home where the Black family lived after 1844. The house was built by William Black and his sons, among them G. V. Black. The clay was dug, the bricks made and burned near the house, and the lumber was sawed out of trees from the timber near the edge of which the house was built. It is still in a perfect state of preservation. The picture shows the west front. The farm was purchased by Dr. G. V. Black about ten years ago.

make a valuable library in themselves. This activity he kept up until a few weeks before his passing.

The present writer had the honor some years ago to write of Dr. Black's works and their contents. That careful resume was approved by Dr. Black himself and perhaps now it would be wise, because of that approval, to quote literally what was then said.

The first article of his which attracted attention was one entitled "Gold Foil," which was read before

By subjecting the gold to heat these gases were volatilized, leaving the surfaces clean and cohesion was always inevitable. This discovery was of incalculable value to the profession, and the claims of the paper have never been refuted.

There appeared in 1886 a series of articles by Dr. Black in the American System of Dentistry, under the following heads: General Pathology; Dental Caries and its Treatment; Diseases of Peridental Membrane; and Abrasion and Ero-

sion of the Teeth. Of these papers, "Diseases of the Peridental Membrane" is most important, because its appearance first drew special attention to the pathology of this membrane. Prominent men all over the world began to study the subject and to publish the results of their inquiries, and what we know of it today is largely due to the impetus given by Dr. Black.

In 1893 he published a paper, "Anchorage of Proximate Fillings in the Bicuspid and Molars"—a paper of great importance because of its suggestiveness.

Careful studies of the force used in mastication and the resistance of filling material to the stress of mastication were the prominent features of this presentation. The paper was a forerun-



Dr. Black's office in Winchester was in the back part of the building in the center of the picture which has the sign "City Drug Store" on it. This was Dr. Black's first office after beginning the practice of dentistry for himself in 1858.

In 1891 Dr. Black published in the Dental Cosmos, a series of papers on the "Management of Enamel Margins;" later, in 1895, the same journal for five months contained an epoch-making series of articles from his pen under the general heading, "An Investigation of the Physical Characters of the Human Teeth in Relation to their Diseases and to the Practical Dental Operations, Together with the Physical Characters of Filling Materials." In this series the idea of "Extension for Prevention" was first made prominent by Dr. Black.

ner of what followed two years later, the invention of the phagodynamometer, an instrument which records accurately the crushing point of all edibles, also a dynamometer for the measurement of the compressability of metals under stress.

Another instrument of equal value invented by Dr. Black was the Amalgam-micrometer, a machine which measures the expansion or contraction of metals to the 1-10,000 part of an inch. No instrument maker could be found who could intelligently put Dr. Black's

idea into shape. He knew that iron manufacturers had an instrument which measured the tensile strength of metals used in buildings, and it was the principle of this machine that he used, and with his own hands formed one of the most delicate of scientific instruments.

Dr. Black's investigations of dental amalgams not only revolu-

pressure brought upon him to commercialize his work. His answer was the publication in full of the results of his years of investigation, and an invitation to any and all manufacturers to send their experts to his laboratory in order that he might unfold the secrets for them. Many amalgams have since been placed upon the market, purporting to be according



Home of G. V. Black while he practiced dentistry in Winchester, Illinois, before the war. The house has had an addition on the west end (left side of illustration) since he lived there. This was his first home after marriage.

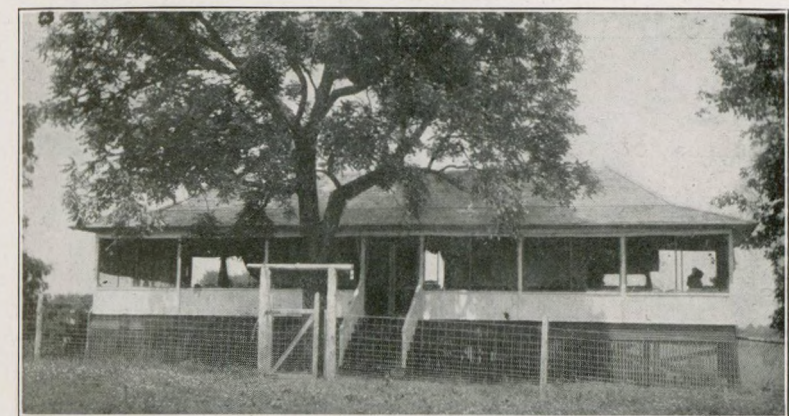
tionized the manufacture of this important filling material by making the various steps and tests bow the knee to exacting laws of science, but also brought out strikingly his unswerving steadfastness to his solidly fixed ideas of professional rectitude. Those who are familiar with the facts know that in 1895 Dr. Black alone knew the secrets of expansion and contraction and had it in his power to control the manufacture of what are now known as high grade alloys. Very few men know of the great

to Dr. Black's formula and implying that the manufacturers had received some secret information from Dr. Black. It should be known that no amalgam formula was ever given to anyone by him; that everything which he learned in his years of investigation was freely given to the profession thru his published articles.

He believed it to be his duty to place the results of his investigations before the world in such a way that there would be the widest opportunity for humanity

to be benefited and his own opportunity for personal financial gain was considered as nothing in the balance. This is a single concrete example of the man who loved to work while others played or profited, in order that the world might progress. It was the combination in this one man of the ability to carry on such investigations, together with the unselfish desire that his fellow men might be happier and live longer

and the silkworm, and taught the farmer and the silk worker how to distinguish the healthy grape and the healthy worm from those which were diseased. These two discoveries and that of the poison of rabies are his principal contributions to science. Koch discovered the bacillus tuberculosis, and gave to the world the method of staining and preparation, so that any microscopist could follow out his investigations. At the same time



"Walnut Lodge," summer cottage on Dr. Black's farm. It was in this bungalow that Dr. Black died.

as a result of his work, that compels the admiration of the world when his labors are at their end.

Dr. Black published in 1884 a book on "Formation of Poisons by Micro-Organisms." This was one of the first books given to the world concerning poisons which emanate from micro-organisms. This work antedated much of the work of Pasteur and Koch, and in the writer's opinion is one of the most important books ever written on bacteriology, in that it gave the chemistry of the poisonous products of micro-organisms. Pasteur's fame rests upon the fact that he discovered the parasites which fed upon the grape

that these men were carrying out these lines of inquiry, Black was making his important investigation into the chemical nature of the poisons of micro-organisms.

In 1887 another book, "A Study of the Periosteum and Peridental Membrane" came from this busy worker. The historical importance of this work rests in the fact that Dr. Black's opinions concerning the peridental membrane raised a wide-spread controversy. The controverted sayings are now generally accepted.

Black's Dental Anatomy was published in 1890; and four editions of it have been entirely exhausted. It is used in nearly every

recognized dental school in the country.

Since the above lines were written in 1898, Dr. Black has written three more books and has been a continuous contributor to our dental journal literature. A partial list of his writings has appeared in nearly every obituary notice of this distinguished writer.

The crowning work of Dr.

treatment of the peridental membrane and dental pulp. Thus these two volumes cover most of dental pathology. Volume II of the Operative Dentistry is devoted to the technical procedures in filling teeth, and is closely related to—in fact is based upon—the pathology presented in the other volumes.

The dentist can get no better idea of the great practicability of



Dr. Black in the woods on Cheyenne Mountain, Colorado, west of Colorado Springs, July, 1900.

Black's life consists of his two volumes on Operative Dentistry, the first edition of which appeared in 1908, and a book entitled Special Dental Pathology, published in April of the present year. These three volumes are to be considered as a group, and constitute in themselves as magnificent a monument as might be desired by any man. Volume I of the Operative Dentistry is devoted to the pathology of the hard tissues of the teeth, including principally dental caries, erosion and atrophy, or hypoplasia. The recent Special Dental Pathology deals with the pathology and

Dr. Black's work than to read carefully these three volumes. He will become impressed with his ability to study and follow to their ends the problems of the profession and present them and their treatment with such clearness of expression and minutia of detail that they may be fully understood and utilized in daily practice. The pathological changes which take place in the peridental membrane are so presented in his recent book as to justify the forecast that the treatment will be practically revolutionized within the next decade.

The last article from Dr. Black's

pen was prepared for the recent Panama-Pacific Dental Congress in San Francisco. This was completed in July, only a few weeks before his death. It is entitled "Mottled Teeth," and is a report of investigations, extending over a period of nine years, into the endemic developmental imperfection of the enamel of the teeth found in several localities in the rocky mountain region, as a result of which the permanent teeth are mottled with blotches of pure white, yellow, brown or black and constitute a serious disfigurement to a large percentage of the population. Dr. Black spent a number of weeks in the west in 1909 to observe these peculiar defects and his recent report is devoted principally to histopathological studies of the condition, together with experiments looking toward a practical solution of the problems involved in treatment.

Dr. Black was a lecturer and teacher for many years. His lectures were delivered all over the country, while several western cities knew him as a teacher. In the 70's he taught in the Missouri Dental College; in 1883 in the Chicago Dental Infirmary, and in 1885 its successor, the Chicago College of Dental Surgery; in 1890-91 in the Dental Department of the University of Iowa. In 1891 he came to Northwestern University Dental School, where he taught until his death. He was made Dean of this School in 1897.

One of the greatest aids which Dr. Black has given to the profession of dentistry, and the one probably most far reaching in its effect, was the introduction of technic work in the schools.

In 1893 Dr. Black was appointed chairman of the Committee on Dental Nomenclature of the Col-

umbian Dental Congress, which met at the World's Fair. For one entire year he searched the libraries of Eastern and Western cities and reviewed the nomenclature of dentistry from the very dawn of the science. At the Congress he submitted this valuable report, which included, in eleven parallel columns, a comparison



A recent photograph of the roadway thru the walnut grove on the Black farm. This grove of about forty acres was planted by Dr. Black's father. Dr. Black spent several weeks each summer in recent years directing the work of trimming these trees, which are to be classed among the finest black walnut trees in Central Illinois.

of the terms used in dental anatomy by eleven authors of French, German and English books. Suggestions were made and plans laid for the future development of dental nomenclature. This revised nomenclature is being gradually adopted as the only correct nomenclature of the profession, including French and German.

Broad and deep as was Dr. Black's work in his chosen profession, his thirst to know and to do was not confined entirely to den-

tistry. What may be called his mental avocations were important enough and were treated with sufficient thoroughness to be the special life work of any other man. He had a good working knowledge of French, Latin, and read German with fluency. His studies in meteorology were so complete that his understanding of winds and storms was as thoro as that of Old

Black's unpublished writings, most of which were read before various organizations on special invitation: a series of lectures on Zoological Chemistry, comprising 148 pages, Typhoid Fever, The Earth Worm, Man-Representative of the Universe, A Study of the Cicada (seven year locusts), The Mechanic Arts of 1776 and 1876, The Pathology of Scarlet Fever, Contractile



Dr. Black trout fishing in Carp River, Northern Michigan.

Probs himself. Dr. Black read a paper on Winds and Storms, before the Literary Union of Jacksonville, Illinois, which was the result of a study of the entire literature of the subject. He made an extended microscopical investigation of fossil woods, of cereals, of earthworms, and many other things, the results of which are not yet published. An elaborate study of various kinds of molds, with their spores was also the work of this indefatigable student. In his library are 5,000 microscopic slides, made and beautifully classified by his hands.

The following are a few of Dr.

Tissue, The Development of the Arts, Report on Scarlet Fever, The Basis of Morality, Studies of Fossil Woods, The Microscope and Its Uses, Inflammation, Progress of Civilization, The Practical Relations of Observation and Thought, Teeth of the Mammalia, A Contribution to the Theory of Sight, The City Waterworks, Waste Products of Thought, The Present Status of the Germ Theory of Disease (1885), Early Diagnosis of Disease of the Kidneys, the Balance of Reason, The Industrial Picture, Sam Marsden's Race for Life (an Indian Story), Influence of the Middle Man in the Formation of

Social Casts in America, Manual Training as an Element in Education, Out Sailing, The Man Eater (a story), From Quebec up the Saguenay and Chicoutimi, Report of a Post-Mortem Examination, Our Police System, How to Rest, Anatomy and Physiology as Illustrating the Functions of the Spiritual Man, Studies of Saprophytic Moulds, Not Tides but Barometric Waves (in the great lakes), Chicago Sanitary Canal and Waterway, Social Dangers to Young Men in the Professional Schools.

There is hardly a paper in this list which does not show some line of special study or investigation carried on over varying periods of weeks, months or years. In each instance the writing was undertaken in ample time for it to have been carefully revised and fully finished before it was presented. Many were splendidly illustrated. These unpublished manuscripts are all preserved in a specially made cover or wrapper for each and are in themselves a striking example of the thoroughness with which every undertaking was performed.

When asked how he managed to accomplish so much in such a thorough manner, Dr. Black answered in his quiet way: "When I first began to practice, at 21, I formed the habit of going to my office early in the morning and putting in an hour of study each day. I have kept this up for many years, and you do not know how much such systematic work will accomplish until you try the plan. When I take up a subject I try to exhaust it thoroughly before I go on to the next."

This utterance fully typifies the man. Systematic, diligent, work-loving, he has erected himself "a monument more lasting than brass"—a proud heritage to those who come after him. Love and revere him as we may, our poor words can add little to what he has already built.

Dr. Black leaves a widow, Mrs. Elizabeth Akers Black; two sons and two daughters—Dr. Carl E. Black of Jacksonville, Ill., Miss Clara Black of Chicago, Dr. Arthur D. Black of Chicago and Mrs. Mark Baldwin of Duluth, Minn.

GREENE VARDIMAN BLACK.

By H. E. Friesell.

On Tuesday, August 31st, an event came to pass that marks the termination of an epoch in Dentistry.

The life work of Dr. Greene Vardiman Black as truly marks an age in dentistry as does that of Euclid in Mathematics, Archimedes in Mechanics, or Homer in Poetry.

At what more appropriate time could his death have occurred than during the period when the leaders of his beloved profession from all parts of the world, were gathered in session at the Panama-Pacific Dental Congress!

When the news of his passing was announced to the Congress and those who loved him realized that they would see him no more, a spirit of sorrow pervaded the assembly. It was more than sorrow. It seemed to be a mingling of sadness, thankfulness, consecration. Sadness that he who had been a living ideal, a glorious inspiration, with whom personal association was one of the greatest privileges and pleasures of life, would never again appear in our midst: Thankfulness that so much of his great lifework had been devoted to dentistry; and that he who had labored so long and so faithfully for the benefit of humanity had gone to his great reward: A profound hope that the spirit of this great master would live on in his many disciples, imbuing them with both desire and ability to continue his labors.

To those loved ones who were privileged to associate with him daily, our sympathies go out in their bereavement; but we also rejoice with them that he whom we mourn enjoyed an earthly existence such as is granted to few mor-

tals, for his life was full of days and of great achievements, and he died after having received all the high honors of his profession and in the merited enjoyment of the love and the veneration of all who had known him.

The prophet hath said: "Tho a man die, yet shall he live," and this is peculiarly true of Dr. Black, for while the physical body is at rest, the spirit of the man pervades every field of dental endeavor as vitally as if he were physically present.

The influence upon Dentistry of Dr. Black's lifework cannot at this time be truly estimated for, while it has touched practically every important phase of the subject and has established the foundations of many of the most important branches, it is not limited to these. The man himself, aside from his scientific attainments which were truly marvelous, has exerted a remarkable influence upon dental education, association and practice.

"He held communion with the invisible forms of Nature, and truly she spoke to him a various language." His sweet kindness, patience, appreciation, tolerance, and his absolute honesty of motive and action have produced a following and an influence in dentistry that are without parallel. His whole life was an illustration of the greatness of true goodness, and the goodness of true greatness. To no man of this or any other age is the profession of dentistry under greater obligations. He was a leader of leaders; a teacher of teachers.

His is the most beloved, as well as the most distinguished name in the annals of dentistry.

