Blind Men Who Have Risen Superior To Their Affliction

THE man who is the world's leading authority on the constitution of steel is stone blind, his eyesight having been destroyed by an explosion which occurred early in his chemical investigations of the constitution of steel. He is Edward DeMille Campbell, since 1905 director of the chemical laboratory of the University of Michigan.

The man to whom learned university professors of mathematics and famous astronomers come for instruction in the most abstruse mathematics has been stone blind from birth. He is Lewis B. Carll, of Brooklyn, famed the mathematical world over as its only living authority on the calculus of variations, a branch of the science which only the cream of the mathematical sharps have brains enough to conquer.

The woman whose 6000 odd gospel songs have gone round the world has been stone blind since she was six months old. Today she is nearing her eighty-eighth birthday, and is as active mentally and physically as she was 44 years ago when she began giving to Christianity such hymns as "Jesus, Keep Me Near the Cross," "Rescue the Perishing," "I Am Thine, O Lord," and "Safe in the Arms of Jesus."

John B. Herreshoff, famous on two continents as the modeler of the latter-day defenders of the America's cup, has not been able to tell day from night since he was 15 years old, when a film began to spread over his eyes and soon thereafter left him in total physical darkness.

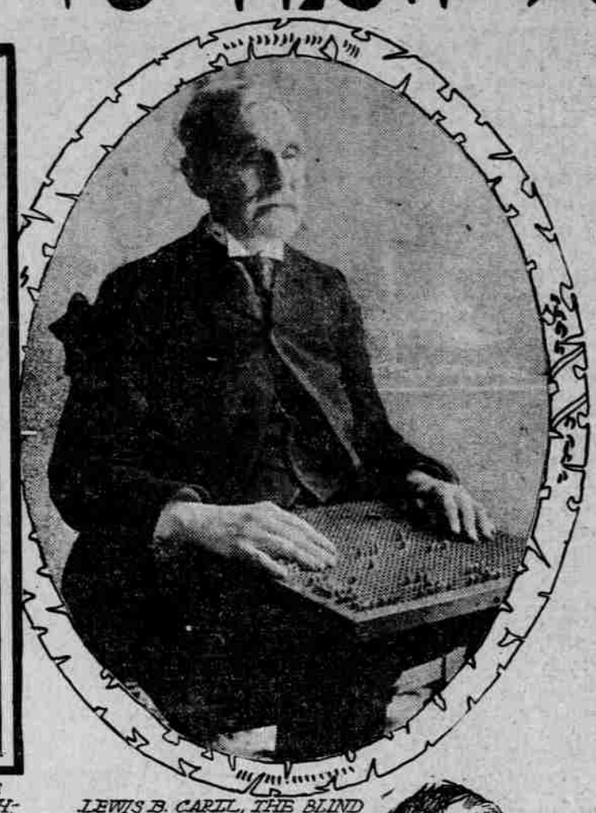
For the first time in its history a blind man has been elected to the Senate of the United States. He is Thomas P. Gore, one of the first pair of toga wearers from the new state of Oklahoma. When he was nine one eye was put out during a quarrel with a playmate; when he was 12 the other was destroyed by another playmate accidentally piercing it with an arrow.

For years two of the sovereign states of the Union — California and Rhode Island—supinely did the bidding of two "blind bosses," Christopher A. Buckley and General Charles R. Brayton, respectively.

The most popular tutor in mathematics at Columbia University, because he is the most successful, is Dr. Newell Perry, whose face, when he was a child of eight on his father's ranch in California, came in contact with some poison, causing him to go blind in a few weeks.

These are only a few of the more prominent blind men and women who, aided almost solely by their indomitable determination to do so, have risen superior to an affliction that the average man or woman looks upon as appalling. A complete list of who's who among the blind would be long, indeed, and include the names of such well-known doers as M. Riggenbach, professor of theology in the University of Basle; M. Camille Lemaire, the French architect, who, on becoming blind, devoted himself to writing a history of architecture; Dr. Emile Javal, the French oculist, who, since becoming sightless at the age of 62, has spent his time teaching others how to perform the operations for which he was famed on the Continent; Dagnia, the organist; to say nothing of the most famous blind personage of modern times—John Milton.

DR. NEWELL PERRY, WHOSE TREATISE ON HIGHER MATHEMATICS IS A STANDARD IN THE UNIVERSITY AT MUNICH

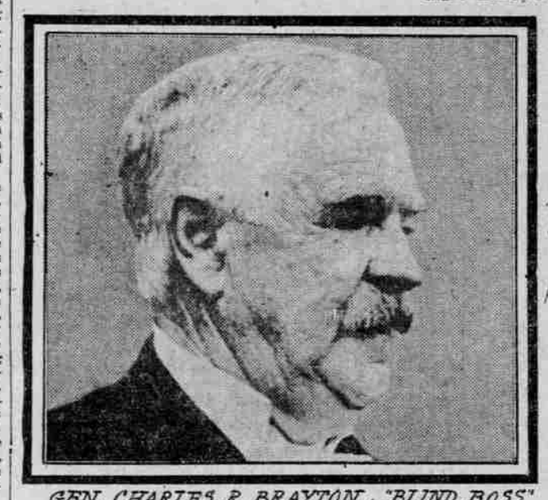


LEWIS B. CARLL, THE BLIND MATHEMATICIAN, WORKING OUT A PROBLEM ON THE MATHEMATICAL SLATE FOR THE BLIND

DR. JOHN FINLEY, PRESIDENT OF THE COLLEGE OF NEW YORK, AND CLEVELAND'S NEAREST NEIGHBOR, IN NEW HAMPSHIRE

PROF. EDW. DeM. CAMPBELL, DIRECTOR OF THE CHEMICAL LABORATORY, UNIVERSITY OF MICHIGAN

THOMAS P. GORE, SENATOR FROM OKLAHOMA



GEN. CHARLES R. BRAYTON, "BLIND BOSS" OF RHODE ISLAND

ONE OF THE UNKNOWN THOUSANDS OF BLIND WHO HAVE RISEN SUPERIOR TO THEIR AFFLICTION

Remarkable Feats of Memory.

Varied as are the careers of present day prominent blind men, a glance at their lives shows that the success of each man rests largely on the circumstance that he has been able to develop his memory to perform feats that deserve classification among the phenomena of the mind.

One of the problems in Mr. Carll's book on "Calculus of Variations" takes up several score pages. He spent three years working out the problem, but not until he had arrived at the correct answer did he commit any portion of the problem to paper by the point system. As fast as he worked out one step of the problem—it took him weeks, sometimes, to do this—he stored the result of his labors in his memory and did not bring it forth again until he, too, could cry "Eureka!" In such manner he wrote the whole of his first book, a formidable volume of 568 pages, on which he spent ten years. His second book, "Afterthoughts on Calculus of Variation," is the result of twenty years of study. It deals with the most difficult mathematical problems known to the human mind—problems that Mr. Carll was not able to master when he wrote his "variations"; hence the name, "Afterthoughts." And no problem in this second work, the only one of its kind ever written, was committed to paper until Mr. Carll, pacing up and down his room, day after day, week after week, month after month, year after year, in several instances, had grasped the solution.

Senator Thomas P. Gore is credited with having graduated in geometry without drawing a line or making a single figure. Perhaps the most remarkable demonstration of his truly remarkable memory was given during a debate with Senator Hernando de Soto Money, of Mississippi, Gore's native state.

Money, at the time, was a candidate for re-election to Congress on the Democratic ticket; Gore, then a Populist, had been selected as the party's best man to answer the arguments of "the gentleman from Mississippi."

Just before the word contest began the blind man requested of his opponent that a division of time be made. Money, who that day had met Gore for the first time, resented the request for some reason, and his reply was none too civil:

"I will speak as long as I please. You are at liberty to do the same."

For three solid hours thereafter Money let loose a veritable flood of talk on the big crowd assembled for miles around the little town of Hoenliuden to listen to the debate. Through it all Gore sat with unruffled brow; then, when his opponent had run out of breath at last, he took the platform and held his hearers spellbound for four solid hours. Incidentally, he quoted, without a slip, page after page of his antagonist's record as set down in the Congressional Record, this having been read to him only a day or two before.

Though he drank himself blind before he went into politics and then put liquor away — for himself — forever, "Boss" Buckley has never forgotten any man whose voice he has heard even once only since he went into politics. To his peculiar ability to remember voice tones he undoubtedly owed much of his success as a "boss." Until he was deposed he ran a low type of saloon in San Francisco. Here politicians of both parties from all over the state would come to pay their homage. Perhaps a visitor had not stood before Buckley for 15 years, and then only long enough to receive his suave "How do you do?" Yet the moment the "boss" heard his caller speak, out would shoot his right hand, and in the most refined drawing-room tones would come the words, "So glad to meet you, Mr. Smith. We haven't met since such and such a convention." Buckley has never been known to make a mistake in name or place of last meeting.

Dr. Newell Perry tutors entirely from memory. Before she was 9 years old Fanny Crosby could repeat, word for word, the first four books of the Old Testament and the first four books of the New Testament, as well. Naturally, her ability to remember whole passages and books of the Bible has had a great deal to do with her success as a writer of sacred hymns. One of her greatest feats of memory was to compose 40 hymns at a sitting and then to write them down one after another, without a moment's hesitation in search of a word or line.

Herreshoff has declared that his success as a yacht builder rests largely on the fact that he can picture so vividly in his mind the boats he saw and the models he owned during the first fifteen years of his life. Had his memory failed him in the slightest degree in this respect he believes he would have possessed no proper mental models to work with and improve upon. It is an everyday occurrence for Professor Campbell to work out intricate chemical formulae in his mind the while he performs before his classes experiments which a chemist with two good eyes undertakes with some anxiety.

Campbell the Blind Chemist.

Professor Campbell's father was Judge James V. Campbell, a noted jurist of the Central States. He was professor of law at the University of Michigan from 1859 to 1885. Five years after he had retired his son became professor of metallurgy and metallurgical chemistry at the university, where he had graduated four years before. After he had become blind he was promoted to junior professor of analytical chemistry, then professor of chemical engineering and analytical chemistry, and two years ago he was made director of the university's chemical laboratory, which is reckoned among the best in the country.

The year that he secured the professorship at his alma mater, Professor Campbell began working on the problem of the constitution of steel. As everybody knows, the hardening of steel is due to a combination of iron and carbon, but why or how iron and carbon change their relations to each other no scientist knows, though many have sought to unravel the mystery. Professor Campbell was endeavoring to learn how much carbon was evolved as gas by decomposing steel with acid when the explosion occurred that rendered him blind. Hydrocarbons mixed with many times their volume of hydrogen were present, and it was while he was trying to separate the hydrogen from the hydrocarbons that the accident took place. Gas mixed with oxygen stored in large glass bottles was led through a capillary glass tube immersed in ice water. The tube contained a minute amount of platinum black, which by its presence caused the hydrogen and the oxygen to combine on its surface. The tube and the ice water should have worked on the same principle as the miner's safety lamp, to prevent the combustion from spreading. But something was wrong and every one of the bottles exploded just as Professor Campbell was leaning over to examine the progress of the experiment. Numerous pieces of glass were driven into his eyes. This was just before the opening of the Spring vacation. At the Fall opening of college Campbell was back again in his place, ready for all his old work.

Here is Professor Campbell's description of the accident:

"I was studying on the slow construction of hydrogen and the gases evolved when steel is dissolved. It didn't go slowly, but rather went quickly. The mixture exploded and caused the accident."

Then he added:

"I took the same gases by another and safer method and from the gaseous products of the solution of steel I formed the present hypothesis of the construction of steel which I published in 1899 in the Journal of the Iron and Steel Institute, and I have not changed my fundamental ideas since that article was published."

At the time of the accident to Professor Campbell there was no clearly formed conception of the formation of steel. Professor Campbell worked on the accumulation of facts for five years and then from this accumulation formed the working hypothesis. Since then he has been testing the validity of these facts and has found nothing as yet to contradict the correctness of the hypothesis. In short, he is accumulating fundamental ideas to get experimental evidence that every scientist will accept; many have accepted his hypothesis.

Within two hours after his eyesight had been destroyed Professor Campbell was planning for his future life and work, and two weeks after the accident he was working with the same gases on the same problem, directing other hands and eyes to do and see for him what he could no longer do and see. Rather recently he is said to have discovered a way to perform without danger the experiment which deprived him of a sense.

At present he has from eight to 12 men working under him on the intricate problem which he is pursuing with an energy that outlasts the endurance of any of his assistants. In order to get the accurate measurements on which he rigidly insists, he has been compelled many times to devise delicate instruments to measure quantity and degree with minute accuracy. These feats of workmanship he has trained his hands to perform with amazing skill; indeed his hands are trained as remarkably as those of Herreshoff, who, simply by running his hands along a yacht's hull, can tell her speed.

As his position at the head of Ann Arbor's chemical laboratory implies, Professor Campbell is decidedly a man of more than one idea. Numerous chemical experiments that have nothing to do with the construction of steel are directed daily by him. Since he became blind the Portland cement industry of the country has been developed. As a chemist Professor Campbell played a prominent part in the development, and is a recognized authority on Portland cement. In 1895 the output of this cement in this country was about one barrel to every 150 persons; now it is about one-half barrel for each person.

"How have you managed to accomplish so much, especially with such a handicap to contend with?," I asked Professor Campbell.

"I found, at the time of my accident, that I must do one of two things," he answered. "I was doing my college work and also a great deal of outside work as a consulting chemist for several concerns. I found that I had to sacrifice one or the other, that I must choose between the two. I gave up the outside commercial work and gave my entire time and energy to the scientific work. All that I can say is that one can accomplish anything by attending to business and sawing wood, and not getting discouraged. Sometimes you study a month, six months, or possibly two years on one idea, only to find out at the end of that time that it is not worth working out. Then you lay it aside and put it down to experience and begin all over again."

One reason of Professor Campbell's ability to accomplish so much in a given period of time is to be found, doubtless, in his enthusiasm for physical exercise. He devotes an hour a day during the college year to work in the gymnasium, in order to keep in good muscular condition. At 11 o'clock every morning he leaves his laboratory with an assistant and goes to the gymnasium in the northeast corner of the campus. By 12 o'clock he has exercised for 25 minutes, taken his bath and subjected himself to a lively rubdown. While exercising he uses the horses, parallel bars and dumbbells, being as clever with them as a full-sighted gymnasium team star.

No professor at Ann Arbor sets such long working hours for himself; none works as many weeks in the year, just 50; none is in better health; none can show a better cared for set of muscles.

Professor Campbell was 44 years old last September. He is a member of the American Chemical Society, the American Institute of Mining Engineering, and an honorary member of the Michigan Gas Association.

Lewis B. Carll, whose fame among mathematicians is even greater than Professor Campbell's among chemists, despite the handicap of sightless eyes, pressed Seth Low, who afterwards became Mayor of Greater New York, for first place in the class in which they graduated from Columbia University. That was in 1870. As a student young Carll had the text books read to him by a companion while the two were traveling between the university and Mr. Carll's home on Long Island. His companion was a boyhood friend sent through Columbia by Mr. Carll's father, that his son might have some one to read his lessons to him. Thus, Mr. Carll took a college course wholly by sound, as it were.

On graduation he planned to become a teacher of the classics, but soon found to his sorrow that nearly every one who desired his services wanted to be instructed in mathematics. In college he had been a fair mathematician. Confronting the situation squarely, he determined to become as proficient in this branch of study as his mental equipment would let him, and from that day to this he has been a solver of the most abstruse mathematical problems known to man.

When he decided to produce his book on "Calculus of Variations," he discovered that only one book had ever been written on that subject, and every copy of it had been lost or destroyed, apparently. He, therefore, had to secure the loan of various rare mathematical papers and pamphlets from the libraries of Harvard, Yale and Europe. Columbia University guaranteeing their safe return. He spent three years collecting in this wise the necessary basic data; the ensuing ten years he devoted almost entirely to building his book.

His method of work was this: He instructed his brothers how to read higher mathematics properly. Then he would have one of them read to him a few lines at a time. Next he would go to his room, lock the door and pace up and down while he digested what had been read to him. Then he would have another fourth or an eighth of a page of figures read to him, and up to his room he would trudge again, to do the heavy thinking. In such fashion he also worked out the problems in his second and greater work.

Professor Campbell, owing to his muscular activity, does not look very much like a typical college professor. Mr. Carll, on the other hand, is the physical embodiment of the erudite student.

Blind Boy Planned to Be Senator.

A blind boy who set out to be a United States Senator, and who has realized his ambition—this, in epitome, is the life story of Thomas P. Gore.

When he was attending school at Walthal, Miss., a copy of the Congressional Record fell into Gore's hands. He got a schoolmate, Charles Pittman, to read from it to him. Among other things, Pittman read the list of United States Senators. Then it was that Tom Gore conceived his ambition of becoming a Senator himself, and in all the years that followed he did not lose sight of the goal that he finally won last December. He is now 36 years old, and until he waged his senatorial campaign was so little known outside the two or three countryside communities in which he has lived that "Who's Who in America" and other reference books know no such man.

Gore began his political career in his native state, Mississippi. He has been a Populist Congressional candidate in Texas, has stumped for Bryan in Indiana, Ohio, Nebraska, and the Dakotas, and is the present idol of the Oklahoma farmers and ranchers, who, in the Senatorial primary, rolled up a big enough majority for him to offset handsomely the adverse majorities in the towns. To secure the $1000 that Gore spent in his campaign, his friends say that he had to mortgage his cottage home in Lawton. His opponents spent $100,000, all told.

During his campaign for Senator Gore went about practically unattended. Whenever possible he spent his nights in the homes of the farmers, no matter what their political belief. His pluck, frankness and unassuming ways usually went straight to the hearts of the farmers and their families, and when, at leave-taking, he asked them to vote in a way that would make a certain little brown-eyed woman happy, it was seldom that he received a negative or evasive reply. The "little brown-eyed woman," of course, is Gore's wife; she is also his political adviser and campaign manager, and the Senator stoutly declares that without her help he could not have won the toga that is now his.

The ambition of Fanny J. Crosby (Mrs. Alexander Van Alstyne) is to live to write songs in her 103d year. That was the age attained by her favorite grandmother, and Miss Crosby believes that sometime during the next 15 years she will write her best hymn.

Miss Crosby declares that she acquired the knack of making words flow rhythmically by taking lessons during her childhood years from the musical little stream that flowed by her home. From the time she entered the New York Institution for the Blind, at the age of 15, until she was 45, she wrote secular songs exclusively, her best know profane song being "There's Music in the Air." Then, at the solicitation of W. D. Bradbury, a publisher of sacred music, she turned to religious songs, and this has been her field ever since. Her first hymn, written in 1864, began,

"We are going, we are going,
To a home beyond the skies,"

and four years later it was sung at the funeral of the man who induced the author to take up hymn writing.

That same year Miss Crosby wrote what is perhaps her most famous song, "Safe in the Arms of Jesus." This is how she came to write ...:

One day Doan, the famous Cincinnati composer, came rushing into Miss Crosby's room; she was in Cincinnati attending a religious meeting.

"Miss Crosby, I want a song," he exclaimed, excitedly. "I must leave the city in 45 minutes. Can you write me one in that time?"

"Hum me the tune to which you are going to set it," Miss Crosby requested.

When Doan had done this she asked him if he had any suggestions as to the character of the song he desired.

"Why, yes," he replied, "Safe in the Arms of Jesus."

The blind woman rapturously clasped her hands.

"Oh, what a beautiful thought!" she cried. Then she fell to work, and in 30 minutes had produced eight verses, three of which are still sung around the world.

A nother Author of Mathematics.

Like Miss Crosby, Dr. Newell Perry, tutor in mathematics for Columbia University students, believes that if he ever regained his sight the development of his work would be greatly hindered. He has been able to concentrate because of his blindness, he says, and he fears that with his sight restored he would lose to a great degree his power to concentrate.

He, too, is the author of a mathematical treatise, which he wrote while a student at Munich, and which that university has adopted as a standard. He went abroad after graduating from the University of California, and taking a post-graduate course at the University of Chicago. He was only 19 when he graduated from California, and his mathematical and other student feats caused him to be known on the Coast as "the brilliant blind student." He went through college on the money he made as a coach.

Unlike most blind persons, Dr. Perry walks neither with a cane nor an attendant. He moves about in a crowded street as easily as Herreshoff does on the deck of a yacht plunging in a frothy sea. So far he has never met with an accident, because, he says, he can tell something about the size of objects he approaches by the sound of his footfall, and governs himself accordingly.

As a student in California, he got his recreation by riding a bicycle. On these trips he was accompanied by a friend who rode ahead a little way and signalled with his bell when vehicles were approaching. When he was in Munich Dr. Perry endeavored to persuade some of his fellow students to ride with him, but they could not understand even why a Yankee should desire to be so foolhardy, and so refused. The professors, too, forbade Perry to ride, and he had to content himself with walking.

General Charles R. Brayton, lately deposed as "boss" of Rhode Island, and blind since 1900, was college bred, like Campbell, Carll, Perry, and Gore. Indeed, Buckley is the country's only "big" blind man who did not go to college. Instead he ran away from home when a boy, and at 20 started in the saloon business opposite the Mare Island Navy-Yard. Brayton was a "boss" before he became blind; Buckley developed into one after he lost his sight. Brayton, like Professor Campbell, did not let the loss of this sense interfere with his life's work; he kept as strong a grip as ever on the Rhode Island Republican machine, loosening his hold only recently after his failure to elect his man United States Senator. He was the political power in little Rhody for upwards of 20 years.

A good deal might be written derogatory of his political methods, but not of his Civil War record. He left college in his sophomore year to organize a company to fight for the Union. When the war closed he had risen to the rank of colonel, as a member of the Heavy Artillery having participated in numerous important engagements, among them being the capture of Port Royal and the reduction of Fort Sumter.