

section one

THE EARLY YEARS



*The Founders (clockwise from upper left): Frank E. Bunts, M.D.,
George W. Crile, M.D., John Phillips, M.D., and William E. Lower, M.D.*

1. THE FOUNDERS

BY ALEXANDER T. BUNTS AND GEORGE CRILE, JR.

*Remove not the ancient landmark, which thy fathers have set.
—Proverbs 22:28*

THE EARLIEST BEGINNINGS

ON AUGUST 27, 1918, DR. GEORGE W. CRILE (KNOWN AS GEORGE CRILE, Sr.), who at the time was with the Lakeside Hospital Unit in France, wrote in his journal:

“What a remarkable record Bunts, Crile and Lower have had all these years. We have been rivals in everything, yet through all the vicissitudes of personal, financial and professional relations we have been able to think and act as a unit.”¹

This sense of cooperation and unity, shared by three of the four future founders of The Cleveland Clinic, made it possible to create the group practice model that still forms the basis for the institution.

Dr. Frank E. Bunts was the senior member of the three surgeons who had been so closely associated for many years before the founding of The Cleveland Clinic. After a brief career in the Navy, he attended medical school for three years at Western Reserve University and graduated in 1886 as valedictorian of his class. After a year of internship at St. Vincent Charity Hospital in Cleveland, he entered the office of Dr. Frank J. Weed, then Dean and Professor of Surgery at the Wooster University Department of Medicine, Cleveland, Ohio. Wooster University’s medical school was located



*Offices of Drs. Weed, Bunts, and Crile at 16 Church Street, 1886-1889
(artist's drawing)*

at what would now be East 14th Street (formerly Brownell) and Central Avenue in Cleveland, if that intersection still existed. An interstate highway now occupies that location. The school was closed and absorbed into Western Reserve University in 1896.

Crile was born in 1864 on a farm in Chili, Ohio. He worked his way through Northwestern Ohio Normal School (later known as Ohio Northern University) in Ada by teaching in elementary schools. After receiving a teaching certificate in 1884, he was appointed Principal of the Plainfield (Ohio) Schools. Soon his interest turned to medicine, mainly as a result of his contacts with a local physician, Dr. A. E. Walker, who loaned him books and with whom he visited patients.² Some of the events of this period are related in his autobiography, among them the fascinating details of “quilling” an obstetric patient by blowing snuff through a goose quill into her nose. The sneezing that this induced led to prompt delivery of the baby. In March 1886, Crile enrolled at Wooster, and in July 1887, after only 15 months, he received his M.D. degree. It is doubtful that Crile spent the entire 15 months there since the Wooster Medical School operated summer sessions only, and Crile continued his work as principal of the Plainfield Schools during the winter. He received a master's degree from the Northwestern Ohio Normal School in 1888, the year after he got his M.D.

Crile served his internship at University Hospital under Dr. Frank J. Weed, and after that he joined Bunts as an assistant to Weed

in his large office practice. Crile described the origin of University Hospital (not to be confused with University Hospitals of Cleveland, established in 1931) in his autobiography. “In 1882, three years before I first came to Cleveland, Dr. Weed and the group of associates who had revived Wooster Medical School, having no hospital privileges for their students except for the county poorhouse, established University Hospital in two old residences on Brownell Street ‘in juxtaposition,’ as the catalogue stated in a high-sounding phrase, to Wooster Medical School. This simple hospital had a capacity of perhaps thirty beds.”

Then, tragically, at age 45 and at the peak of his professional career, Weed contracted pneumonia and died. At that time, Bunts was not yet 30 years old and Crile was three years younger. Crile expressed their feelings as follows:

“Wearied by loss of sleep, worry and constant vigil, we left Doctor Weed’s house on that cheerless March morning and walked to Doctor Bunts’s for breakfast. In our dejection, it seemed to us that everything had suddenly come to an end. Our light had gone out. We had no money, no books, no surgical instruments. The only instrument either of us owned, other than my microscope, was a stethoscope. But we agreed to carry on together, to share and share alike both the expenses and the income from the accident practice, each to reserve for himself the income from his private patients.”

After talking with Mrs. Weed, Bunts and Crile decided to buy, from the estate, Dr. Weed’s goods, chattels, and instruments. Excerpts from the bill of sale are listed below. This property represented the embryo from which The Cleveland Clinic was born.³

Bill of Sale	
From Estate of Dr. Frank J. Weed	
to	
Dr. Frank E. Bunts and Dr. George Crile	
Small brown mares (Brown Jug and Roseline)	\$125.00
Small sorrel horse (Duke)	100.00
Bay horse (Roy)	75.00
Top buggy	50.00

Bill of Sale (continued)	
Top buggy, very old	\$10.00
Open buggy	20.00
2 Cutters, one very old	20.00
4 sets single harness	20.00
Lap robes	15.00
Miscellaneous articles in barn	3.00
Shed, old stoves, battery, etc.	50.00
Articles on stand	20.00
Milliamperes	10.00
Contents of case (silk, bandages, and dressings)	15.00
Contents of desk (hand mirror, 6 sprinklers, medicine case)	8.00
Medicine on desk	25.00
3 McCune chisels	3.75
4 Small chisels	2.00
14 Pairs scissors	2.50
3 Large pairs shears	1.50
2 Pairs retractors	2.00
2 Forceps	2.50
3 Nasal saws	1.50
2 Intestinal clasps	1.00
1 Chain saw	2.00
2 Hayes saws	1.50
1 Small met. saw	.50
7 Needles	1.00
4 Wire twisters	1.00
6 Sponge holders	1.50
1 Clamp	2.00
3 Bullet forceps	2.00
2 Large retractors	2.00
4 Small nasal dilators	1.25
1 Throat forcep	1.50
1 Head reflector	2.50
4 Self retaining female catheters	1.75
2 Tools	.50
5 Bone elevators	2.00
5 Bone forceps	6.00
1 Chain saw guide	.75
1 Bone drill with three tips	.75
1 Hamilton bone drill with four tips	3.00
1 Emergency bag No. 2	5.00
1 Emergency bag No. 3	11.00
1 Box—3 knives and 3 pairs scissors	1.50
1 Stomach pump in box	6.00
1 Stone set in case	8.00
1 Horse shoe turnica	1.00
1 Cloven clutch	4.00
1 Small aspirating set	2.00
1 Kelley pad	.75
1 Syringe	.50
1 Microscope	40.00
2 Syringes	1.50
Total	\$1778.10

Bill of Sale (**continued**)

Cleveland, O., Apr. 10th, 1891

In consideration of seventeen hundred and seventy eight 10/100 dollars I have this day sold to Drs. F. E. Bunts and G.W. Crile all the goods, chattels, instruments and other articles contained in brick house and barn in rear at No. 380 Pearl Street as per inventory marked Exhibit A attached to bill of sale.

C. H. Weed, Administrator of Frank J. Weed

EARLY PRACTICE

The practice of the new partners grew rapidly, and by 1892 they needed an associate. Crile engaged his cousin, Dr. William E. Lower. Both had attended district schools. Lower, too, had been reared on a farm and from an early age had developed a sense of independence as well as the importance of hard work and the necessity of thrift and frugality. Lower had attended the Medical Department of Wooster University, from which he was graduated in 1891; he served as house physician in City Hospital, and then set up practice in Conneaut, Ohio. Bunts and Crile had little difficulty in persuading him to leave there to share their office practice. By 1895, Bunts, Crile, and Lower were full partners, equally sharing the expenses and the income from emergency work but remaining competitors in private practice. Mutual trust and confidence became a keystone for their future accomplishments.

With the continued growth of their practices, Bunts, Crile, and Lower moved their office in 1897 from the west side of Cleveland downtown to the Osborn Building, at the junction of Huron Road and Prospect Avenue. A year later, this collaboration was interrupted by the Spanish-American War; Bunts was surgeon to the First Ohio Volunteer Cavalry Unit of the Ohio National Guard, and Crile was surgeon to the Gatling Gun Battery in Cleveland, also a unit of the Guard. When they volunteered for active duty, Lower was left alone with the office practice. Not long after the war was over and his partners had returned, he retaliated by volunteering to help quell the Boxer Rebellion in China, entering the Army as a first lieutenant. By the time he reached China, the rebellion was over, so he served as surgeon to the 9th U.S. Cavalry in the Philippines, 1900-1901.



*Offices of Drs. Bunts, Crile, and Lower at 380 Pearl Street
(now West 25th Street), 1890-1897 (artist's drawing)*



*Offices of Drs. Bunts, Crile, and Lower, Osborn Building at East 9th Street
and Huron Road, 1897-1920 (artist's drawing)*

By 1901, the various wars were over, and Bunts, Crile, and Lower were reunited in the Osborn Building office, where they remained until World War I separated them again. The period immediately before World War I was productive. In addition to their large trauma and private practices, Bunts became professor of principles of surgery and clinical surgery at the Western Reserve University School of Medicine. He was also the first president of the newly formed Academy of Medicine of Cleveland. Crile was professor of surgery at Western Reserve. Lower, whose major interest soon became urology, was associate professor of genito-urinary surgery at Western Reserve. Both Crile and Lower also served as presidents of the Academy of Medicine during its first decade.

During these years, Crile maintained his interest in physiology and applied to clinical practice the principles that he discovered in the laboratory in the fields of shock, transfusion, and anesthesia. Lower collaborated in some of Crile's early works, but neither he nor Bunts shared Crile's consuming and lifelong interest in basic laboratory research.

As the practice expanded, Dr. Harry G. Sloan, a surgeon, was added to the staff, and Dr. John D. Osmond was sent to the Mayo Clinic to observe the newly developed techniques of radiology. Osmond returned to establish, in 1913, the group's first X-ray Department. Dr. Thomas P. Shupe also joined the staff as an associate of Lower in urology.

At that time, Crile was helping to form the American College of Surgeons. The purposes of this organization were to improve the standards of surgical practice in the United States and Canada, as well as to provide postgraduate education, improve ethics, raise the standards of care in hospitals, and educate the public about medical and surgical problems.

THE WORLD WAR I YEARS

In 1914, Europe was ablaze with war. In December of that year, Crile, who was then Chief Surgeon at Lakeside Hospital, was asked by Clevelander Myron T. Herrick, then Ambassador to France, to organize a team to work in France. Crile accepted, for even at that time he realized that the United States would be drawn into the

war and that experience in military surgery would be valuable. As Crile prepared to leave for France, Lower drafted a report to be presented to the office staff. The final report is less interesting than this draft, here reproduced with some minor editing to correct errors. Both versions are in the Archives of The Cleveland Clinic Foundation.

Partial Report for the Year 1914

In behalf of Drs. Bunts, Crile, and Lower, I want to make a necessarily incomplete report for the year 1914, incomplete because the year is not entirely ended and because the rush of extra work at this time has made it impossible to get all the necessary data ready. It is only by summing up of the year's work that we can get a keen appreciation of what we have accomplished. I wish you to particularly hear this because of the important part you all have taken in the work.

Your loyalty, zeal, enthusiasm, and devotion we have all recognized throughout the year, and we wish to take this occasion to tell you how keenly we appreciate it and also to get your suggestions, if any, for the coming year.

The great European conflict has had its effect upon practically every line of public endeavor in every country of the globe and will continue to do so, more or less, until the war is ended. This means personal sacrifice, more economy, and greater efficiency if we wish to hold our place. Our work is particularly trying because it deals solely with others' afflictions. It means great tact, every consideration for the comfort of our patients, the application of the latest and best scientific and practical means for the alleviation of their ailments; special research and laboratory work, reviewing of the literature, the development of new methods of treatment, and the careful computing of our clinical results, which is a guide as to the value of any method of treatment.

The following statistics show approximately what we have done.

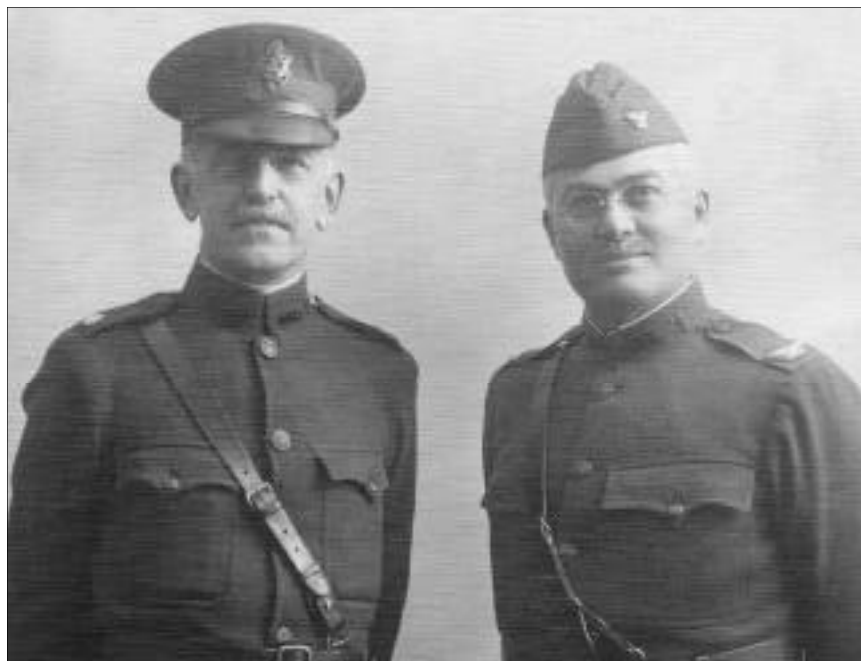
Number of cases seen in 1913	8,467
Number of cases seen in 1914	9,245

Number of examinations for the Railroad Companies in 1913	3,185
Number of examinations for the Railroad Companies in 1914	2,378
Number of laboratory tests	
Wasserman Reactions	113
Complement Fixation Tests	192
Cystoscopies	105
Ureteral Catheterizations	31
Number of papers read at different meetings	30
Number of articles published in the Medical Journals	30+
Number of reprints sent out	10,000
Number of books published	2

This office has always felt equal to any emergency or occasion that might arise. During the breaking out of the Spanish-American war, when we were just beginning to feel our way, and trying to take our place in the professional world, Drs. Bunts and Crile gave up their work to serve during the war. It was a big office sacrifice. Upon their return I went into our foreign service for a period of nearly one year. Now the opportunity has again arisen to do our part in the great European war and again we are ready. Dr. Crile with his traditional enthusiasm and resources goes to take charge of a division in the American Ambulance Hospital in Paris. With him goes our great aide-de-camp, Miss Rowland, whose ability and capacity for work we all know. With this important division away, the lesser of us must try all the harder to keep the good work going. It means for the rest of us no let down if the coming year is to make anywhere near as good a showing as this one has.

After three months of treating casualties at Neuilly, the group returned, and Crile organized a base-hospital unit.

When the United States entered the war, the Lakeside Unit (U.S. Army Base Hospital No. 4) was the first detachment of the American Expeditionary Forces to arrive in France, taking over a British general hospital near Rouen on May 25, 1917. Crile was the hospital's Clinical Director, but later was given a broader assignment as Director of the Division of Research for the American Expeditionary



Lt. Col. Frank E. Bunts and Col. George W. Crile at Rouen, France, 1918

Forces, a post that permitted him to move about and visit the stations wherever the action was.

Lower was with Crile in the Lakeside Unit, and soon Bunts, a reservist, was ordered to Camp Travis, Texas, leaving only Sloan and Osmond to keep the practice going. Both were able to pay the office expenses, but Bunts, concerned about the future, wrote to Lower in France as follows:

“I feel very strongly that we ought to hold the office together at all hazards, not only for ourselves, but for the younger men who have been with us and whose future will depend largely on having a place to come back to. If Sloan and Osmond go, I think we could at least keep Miss Slattery and Miss Van Spyker. It would be quite an outlay for each of us to ante up our share for keeping the office from being occupied by others, but I for one would be glad to do it. We haven't so very many years left for active work after this war is over, and it would seem to be almost too much to undertake to start afresh in new offices, and the stimulus and friendship of our old associations mean much more than money to me.”

Bunts succeeded Lower as commanding officer of the hospital near Rouen in August 1918. After the armistice, November 11, 1918, activities at the Base Hospital gradually subsided, tensions eased, and soldiers found time to engage in nonmilitary pursuits and conversations. The long and friendly association of the three Cleveland surgeons is apparent in the following letter written in December 1918 and addressed to Lower in Cleveland from Bunts in France.

“It’s getting around Christmas time, and while I know this won’t reach you for a month, yet I just want to let you know that we are thinking of you and wishing we could see you. Crile has been here for a couple of weeks, but left again for Paris a few days ago, and evenings he and I have foregathered about the little stove in your old room, leaving G. W.’s door open wide enough to warm his room up too, and there we have sat like two old G.A.R. relics, smoking and laughing, telling stories, dipping back into even our boyhood days and laughing often til the tears rolled down our cheeks. It has been a varied life we three have had and filled with trials and pleasures without number. I have dubbed our little fireside chats the ‘Arabian Nights,’ and often we have been startled when the coal gave out and the fire died down that it was long past midnight and time for antiques to go to bed.”

During those nocturnal chats at Rouen, an idea that eventually led to the founding of The Cleveland Clinic took shape. The military hospital experience impressed these men with the efficiency of an organization that included every branch or specialty of medicine and surgery. They recognized the benefits that could be obtained from cooperation by a group of specialists. Before their return to the United States they began to formulate plans for the future.

RETURN TO PRACTICE

Bunts and Crile returned to Cleveland early in 1919 and were once more united with Lower in their Osborn Building offices. They began to rebuild their interrupted surgical practices and soon found themselves as busy as they had been before the war.

Although the military hospital was used as a model for their future plan, elements of the pattern were furnished also by the Mayo Clinic, founded by close professional friends. Bunts, Crile, and Lower were surgeons, and in order to develop a broader field of medical service they resolved to add an internist to organize and head a department of medicine. They were fortunate to obtain the enthusiastic cooperation of Dr. John Phillips, who was at that time a member of the faculty of the School of Medicine of Western Reserve. He, too, had served in military hospitals during the war and held the same broad concept of what might be accomplished by a clinic organization.

John Phillips was born in 1879 on a farm near Welland, Ontario. He was a quiet, serious-minded youth who nevertheless had a keen sense of humor. After obtaining his teacher's certificate, he taught for three years in a district school. He then entered the Faculty of Medicine in the University of Toronto, where in 1903 he received the M.B. degree with honors. After graduation he served for three years as intern and resident in medicine at Lakeside Hospital in Cleveland. He then entered practice as an associate in the office of Dr. E. F. Cushing, professor of pediatrics at Western Reserve. During the years before the founding of The Cleveland Clinic, Phillips held assistant professorships in both medicine and therapeutics at the Western Reserve University School of Medicine. Simultaneously, he had hospital appointments at Babies' Dispensary and Hospital and Lakeside Hospital. He was also consulting physician to St. John's Hospital. Phillips had a large private and consulting practice and was highly regarded for his ability as clinician and teacher in internal medicine and the diseases of children. During World War I, he served as a captain in the Medical Corps of the United States Army.

In 1920, most private physicians did not like the idea of group practice. Some felt that the large resources available to a group might give them an unfair competitive advantage. Many were openly critical of the concept and might have attempted to block the establishment of The Cleveland Clinic if the founders had not been so highly regarded in the medical community. All were professors in one or more of the Cleveland medical schools. Crile was a major national and international figure in surgery and in national medical organizations; Lower was already well known nationally as a urologic surgeon; Phillips had a solid reputation locally and nationally

in internal medicine; and Bunts's professional and personal reputation was of the highest order. As previously noted, Bunts, Crile, and Lower had all been presidents of the Academy of Medicine, and Phillips was the president-elect.

The founders' reputation was not based solely on the medical schools; it also was well established in the community hospitals. They held appointments at Cleveland General, University, City, St. Alexis, St. Vincent Charity, Lutheran, St. John's, Lakeside, and Mt. Sinai hospitals. Moreover, many of the community's business leaders were their patients and friends. It would have been difficult to stand in the way of any legitimate enterprise that these physicians decided to organize. This point is underscored by a thumbnail sketch of their personalities as Dr. George Crile, Jr., remembered them.

“Crile was the dynamo of the group, imaginative, creative, innovative, and driving. It is possible that some considered him inconsiderate of others in his overriding desire to get things done. For this reason, and because he occasionally was premature in applying to the treatment of patients the principles learned in research, he had enemies as well as supporters. Yet most of his contemporaries would have readily admitted that Crile was one of the first surgeons in the world to apply physiologic research to surgical problems, that he was one of the country's leaders in organizing and promoting medical organizations such as The American College of Surgeons of which he became the president, and that it was largely as a result of Crile's energy, prestige, and practice that The Cleveland Clinic was founded.

“If Crile was the driver, Lower was the brake. He was a born conservative, even to the point of the keyhole size of his surgical incisions. No one but he could operate through them. His assistants could not even see into them. He was a technician of consummate skill and an imaginative pioneer in the then new field of urology. Lower was also a perfect treasurer. He checked on every expenditure, thus compensating for Crile's tendency to disregard the Clinic's cash position. Later in life, Doctor Lower even went around the buildings, in the evenings, turning out lights that were burning needlessly. He was no miser, but his conservatism afforded a perfect balance to Crile's over-

enthusiasm. Despite the differences in their personalities, no one ever saw them quarrel.

“I never knew Bunts as well as the others, for he died early, but I do recall that he never, in my presence at least, displayed the exuberant type of humor that Crile and Lower did. I have seen the latter two almost rolling on the floor in laughter as they reminisced on how they dealt with some ancient enemy, but I could not imagine Bunts doing that. He had the presence and dignity that one associates with the image of an old-time senator. ‘Bunts was invaluable in our association,’ my father once told me. ‘He was the one that gave it respectability.’

“Phillips, like Bunts, died early, so that I knew him only as my childhood physician rather than as a personal friend. My impression was of a man who was silent, confident, and imperturbable. I am sure that his patients and colleagues shared this confidence in him and that was why he was able to organize a successful department of internal medicine.

“Although the personalities of the Clinic’s founders were so different from one another, there were common bonds that united them. All had served in the military, all had taught in medical schools, all were devoted to the practice of medicine. As a result of these common backgrounds and motivations, there emerged a common ideal—an institution in which medicine and surgery could be practiced, studied, and taught by a group of associated specialists. To create it, the four founders began to plan an institution that would be greater than the sum of its individual parts.”

¹ An important source for *To Act as a Unit* was *George Crile, An Autobiography*, edited with sidelights by Grace Crile, Philadelphia, J.B. Lippincott, 1947. George Crile was the author of 650 publications, including several books.

² The State of Ohio recently commemorated this phase of Crile’s career by placing a historical marker in Plainfield on June 3, 2001. Near the marker is the grave of Dr. Walker, Crile’s earliest medical mentor.

³ This document is now located in the Archives of The Cleveland Clinic.

2. THE FIRST YEARS

1921-1929

BY ALEXANDER T. BUNTS AND GEORGE CRILE, JR.

*Life is a petty thing unless it is moved by the indomitable
urge to extend its boundaries. Only in proportion as we
are desirous of living more do we really live.*

—José Ortega y Gasset, 1925

BUILDING THE NEW CLINIC

IN OCTOBER 1919, THE FOUNDERS, WITH THE AID OF BUNTS'S SON-IN-LAW Mr. Edward C. Daoust, an able attorney, formed the Association Building Company to finance, erect, and equip an outpatient medical building. Organized as a for-profit corporation, the company issued common and preferred stock, most of which was bought by the founders and their families, and leased a parcel of land on the southwest corner of East 93rd Street and Euclid Avenue. At the time of construction, the corporation acquired the land under the original building from Ralph Fuller through a 99-year lease (also referred to as a "perpetual lease") beginning October 29, 1919. This lease eventually passed, through inheritance, into the hands of the Worthington family, from whom The Cleveland Clinic bought it, as authorized by the Board of Trustees, on October 5, 1970. Ironically, this bit of land was the last in the block to be acquired by The Cleveland Clinic!

The architectural firm of Ellerbe and Company estimated that a suitable building could be constructed for \$400,000. Excavation



*Oakdale Street (later East 93rd), looking south from Euclid Avenue, circa 1887
(Courtesy: Cleveland Public Library)*

began in February 1920, and a year later the building was completed. Although the Crowell-Little Company was the contractor, Crile said in his autobiography that “the real builder of the Clinic was Ed Lower, he knew each brick and screw by name and was on hand early enough every morning to check the laborers as they arrived.”

The Clinic Building (now known as the “T Building”) had four stories, of which the upper three were built around a large central well extending from the second floor up to a skylight of tinted glass. The main waiting room, handsome with tiled floors and walls and with arched, tiled doorways and windows, was at the bottom of the well on the second floor. The offices, examining rooms, and treatment rooms opened onto the main second-floor waiting area and onto corridors consisting of the balconies that surrounded the central well on the third and fourth floors. On the first floor were the x-ray department, the clinical laboratories, and a pharmacy. On the fourth floor were the art and photography department, editorial offices, a library, a boardroom in which the founders met, offices for administrators and bookkeepers, and Dr. Crile’s biophysics laboratory. Thus, from the beginning there were departments representing not only the cooperative practice of medicine, but also education and research.



Original Clinic Building, 1921



Waiting room, original Clinic Building, 1921

From the time of The Cleveland Clinic's formation as a not-for-profit corporation, there were no shareholders, and no profits accrued to the founders. All of them received fixed salaries set by the trustees. Likewise, all other members of the Clinic staff received salaries that were not directly dependent on the amount of income they brought into the Clinic.

The founders had donated substantially to the Clinic's capital funds, and in the formative years they had taken the risk of personally underwriting the Clinic's debts in order to establish a nonprofit foundation dedicated to service to the community, medical education, and research. To ensure there would be no future deviation from these aims, the founders empowered the Board of Trustees, at its discretion, to donate all assets of the organization to any local institution incorporated "for promoting education, science, or art." These assets could, thus, never contribute to anyone's personal enrichment.

At the first meeting of the incorporators on February 21, 1921, the signers were elected Trustees of the new institution, and provision was made for increasing the number of trustees to as many as fifteen if this became desirable. Bunts, Crile, Lower, and Phillips were designated Founders.

CHARTER AND ORGANIZATION

The Cleveland Clinic's charter is an extraordinary document for its time because the scope of medical practice it defined was so liberal. The document, reproduced below, also raised the issue of the corporate practice of medicine, much criticized at the time. The charter granted by the State on February 5, 1921, reads as follows:

These Articles of Incorporation of the Cleveland Clinic Foundation

WITNESSETH: That we, the undersigned, all of whom are citizens of the State of Ohio, desiring to form a corporation, not for profit, under the general corporation laws of said State, do hereby certify:

FIRST: The name of said corporation shall be The Cleveland Clinic Foundation.

SECOND: Said corporation and its principal office is to be located at Cleveland, Cuyahoga County, Ohio, and its principal business there transacted.

THIRD: The purpose for which said corporation is formed is to own and conduct hospitals for sick and disabled persons; and in connection therewith, owning, maintaining, developing and conducting institutions, dispensaries, laboratories, buildings and equipment for medical, surgical, and hygienic care and treatment of sick and disabled persons, engaging in making scientific diagnoses and clinical studies in, carrying on scientific research in, and conducting public lectures on, the sciences and subjects of medicine, surgery, hygiene, anatomy, and kindred sciences and subjects, accepting, receiving and acquiring funds, stocks, securities and property by donations, bequests, devises or otherwise, and using, holding, investing, reinvesting, conveying, exchanging, selling, transferring, leasing, mortgaging, pledging and disposing of, any and all funds, stocks, securities and property so received or acquired, charging and receiving compensation for services, care, treatment, and accommodations for the purpose of maintaining said hospitals not for profit and the doing of all acts, exercising all powers and assuming all obligations necessary or incident thereto.

IN WITNESS WHEREOF, We have hereunto set our hands, this 5th day of Feb. A.D. 1921

Frank E. Bunts
 George W. Crile
 William E. Lower
 John Phillips
 Edward C. Daoust

The practice of medicine in the United States has traditionally been founded on the sanctity of the doctor-patient relationship. A somewhat questionable and clearly self-serving economic corollary is that, to preserve this relationship, an individual patient must pay a fee for medical service directly to the doctor of his or her choice. Organized medicine has always resisted attempts to change the basis of this relationship, and the legal system has generally been supportive of this view. Similarly, lawyers have sought to preserve the lawyer-client

relationship, threatened by large corporations, such as banks, that set out to sell legal services to customers through the offices of their salaried lawyers. If a corporation were allowed to do the same with the services of physicians, i.e., engage in corporate medical practice, by analogy a precedent dangerous to the status of lawyers might be established. For this reason, most state legislatures, being dominated by lawyers, passed laws prohibiting the corporate practice of medicine, and most group practices, whether operating for profit or not, were obliged to include within their structure some sort of professional partnership in order to bill patients and to collect fees legally. The properties of the Mayo Clinic, for example, have always been held by a nonprofit foundation. The physicians, however, were organized first as a partnership and then as an association from 1919 to 1969. The doctors received salaries from the fees paid by patients and turned over to the Mayo Foundation the excess of receipts over disbursements. This “landlord-tenant” relationship between the Mayo Foundation and its medical staff was changed in 1970 when, as a result of corporate restructuring, all interests came under the Mayo Foundation. Thus, in most nonprofit clinics, devious means have been used to achieve what The Cleveland Clinic accomplishes directly; the organization itself collects fees and pays the salaries of its staff. Today, with the strong trend toward group practice, the right of a nonprofit organization like the Clinic to “practice medicine” is unlikely to be challenged. The charter of 1921 remains a source of wonder to lawyers.

Thirteen members made up the professional staff of The Cleveland Clinic in its first year. Joining Bunts and Crile were Dr. Thomas E. Jones and Dr. Harry G. Sloan in surgery. Lower was joined by Dr. Thomas P. Shupe in urology. With Phillips in medicine were Dr. Henry J. John, Dr. Oliver P. Kimball, and Dr. John P. Tucker. Henry John was also head of the clinical laboratories. Dr. Justin M. Waugh was the otolaryngologist, Dr. Bernard H. Nichols was the radiologist, and Hugo Fricke, Ph.D., was the biophysicist.

Crile was elected the first president of The Cleveland Clinic Foundation; Bunts, vice president; Lower, treasurer; and Phillips, secretary. Daoust, who had so skillfully handled the Clinic’s legal needs, was designated a life member of the Board of Trustees.

THE GRAND OPENING

At 8:00 P.M. on February 26, 1921, 500 local members of the medical profession and many physicians from outside the city attended the opening of The Cleveland Clinic. This event was modestly noted in the *Bulletin of the Academy of Medicine of Cleveland* as follows:

“CLINIC BUILDING OPENS

“Drs. Frank E. Bunts, George W. Crile and W.E. Lower and their associates, Dr. H.G. Sloan, T.P. Shupe, Bernard H. Nichols, Thomas E. Jones and Justin M. Waugh, announce the removal of their offices from the Osborn Building to the Clinic Building, Euclid Avenue at East 93rd Street, effective March 1st, 1921.”

Among those from other cities were Dr. William J. Mayo of Rochester, Minnesota, who delivered the main address of the evening; Dr. Joseph C. Bloodgood of Baltimore, Maryland; and Dr. J. F. Baldwin of Columbus, Ohio. The program included talks by each of the founders and by Charles Howe, president of the Case School of Applied Science. Mayo gave the main address.

Crile described the incorporation of The Cleveland Clinic and outlined its purposes and aims as follows:

“With the rapid advance of medicine to its present-day status in which it evokes the aid of all the natural sciences, an individual is no more able to undertake the more intricate problems alone, without the aid and cooperation of colleagues having special training in each of the various clinical and laboratory branches, than he would be today to make an automobile alone. We have, therefore, created an organization and a building to the end that in making a diagnosis or planning a treatment, the clinician may have at his disposal the advantages of the laboratories of the applied sciences and of colleagues with special training in the various branches of medicine and surgery.

“Another reason for establishing this organization is that of making permanent our long-time practice of expending for research a goodly portion of our income. On this occasion we are pleased to state that we and our successors are pledged to give not less than one-fourth of our net income toward building

up the property and the endowment of The Cleveland Clinic Foundation. It is through The Cleveland Clinic Foundation under a state charter that a continual policy of active investigation of disease will be assured. That is to say, we are considering not only our duty to the patient of today, but no less our duty to the patient of tomorrow.

“It is, moreover, our purpose, also pursuant to our practice in the past, that by reason of the convenience of the plant, the diminished overhead expense, and the accumulation of funds in the Foundation, the patient with no means and the patient with moderate means may have at a cost he can afford, as complete an investigation as the patient with ample means.

“The fourth reason for the establishment of this Clinic is educational. We shall offer a limited number of fellowships to approved young physicians who have had at least one year of hospital training, thus supplementing the hospital and the medical school. In addition there will be established a schedule of daily conferences and lectures for our group and for others who may be interested.

“This organization makes it possible to pass on to our successors experience and methods and special technical achievements without a break of continuity.

“Since this organization functions as an institution, it has no intention either to compete with, nor to supplant the individual practitioner who is the backbone of the profession and carries on his shoulder the burden of the professional work of the community. We wish only to supplement, to aid, and to cooperate with him.

“Since this institution is not a school of medicine, it cannot, if it would, compete in any way with the University, but what it proposes to do is to offer a hearty cooperation in every way we can with the University.

“Our institution is designed to meet what we believe to be a public need in a more flexible organization than is possible for the University to attain, because the University as a teaching organization must of necessity be departmentalized. As compared with the University, this organization has the advantage of plasticity; as compared with the individual practitioner it has the advantage of equipment.

“The result of such an organization will be that the entire staff—the bacteriologist, the pathologist, the biochemist, the physicist, the physiologist, and radiologist, no less than the internist and the general surgeon, each, we hope and believe, will maintain the spirit of collective work, and each of us will accept as our reward for work done, his respective part in the contribution of the group, however small, to the comfort, and usefulness, and the prolongation of human life.

“Should the successors seek to convert it into an institution solely for profit or personal exploitations, or otherwise materially alter the purpose for which it was organized, the whole property shall be turned over to one of the institutions of learning or science of this city.”

Bunts reviewed the concepts underlying the Clinic’s unique organizational structure and outlined the founders’ aims and hopes for the future. He stated that the founders hoped that, when their associates took the places of their predecessors, they would “carry on the work to higher and better ends, aiding their fellow practitioners, caring for the sick, educating and training younger men in all the advances in medicine and surgery, and seeking always to attain the highest and noblest aspirations of their profession.”

Phillips reemphasized the fact that the founders had no desire for the Clinic to compete with the family physician. Instead, they sought to make it a place to which general practitioners might send patients for diagnostic consultations.

Lower explained the design of the building and its plan of construction, which was intended to ensure the greatest efficiency for each department, resulting in the most salutary operation of the Clinic as a whole, for the ultimate welfare of the patients.

Mayo’s speech was entitled “The Medical Profession and the Public.” Its content was significant, and it contained many truths and ideas that are still worthy of consideration. He spoke in part as follows:

“On every side we see the acceptance of an idea which is generally expressed by the loose term ‘group medicine,’ a term which fails in many respects to express conditions clearly. In my father’s time, success in the professions was more or less dependent on convention, tradition, and impressive surroundings. The top hat

and the double-breasted frock coat of the doctor, the wig and gown of the jurist, and the clerical garb of the ecclesiastic supplied the necessary stage scenery. The practitioner of medicine today may wear a business suit. The known facts in medicine are so comprehensive that the standing of the physician in his profession and in his community no longer depends on accessories.

“So tremendous has been the recent advance of medicine that no one man can understand more than a small fraction of it; thus, physicians have become more or less dependent on the skill, ability, and specialized training of other physicians for sufficient knowledge to care for the patient intelligently. An unconscious movement for cooperative medicine is seen in the intimate relation of the private physician to the public health service made possible by the establishment of laboratories by the state board of health and similar organizations. On every hand, even among laymen, we see this growing conception of the futility of the individual effort to encompass the necessary knowledge needed in treating the simplest and most common maladies because of the many complications which experience has shown are inherent possibilities of any disease.”

Mayo went on to discuss some of the fundamental political and professional aspects of medical care and ended by stating:

“[O]f each hundred dollars spent by our government during 1920, only one dollar went to public health, agriculture and education, just one percent for life, living conditions, and national progress. . . . The striking feature of the medicine of the immediate future will be the development of medical cooperation, in which the state, the community, and the physician must play a part.

“[P]roperly considered, group medicine is not a financial arrangement, except for minor details, but a scientific cooperation for the welfare of the sick.

“Medicine’s place is fixed by its services to mankind; if we fail to measure up to our opportunity, it means state medicine, political control, mediocrity, and loss of professional ideals. The members of the medical fraternity must cooperate in this work, and they can do so without interfering with private professional practice. Such a community of interest will raise the general

level of professional attainments. The internist, the surgeon, and the specialist may join with the physiologist, the pathologist, and the laboratory workers to form the clinical group, which must also include men learned in the abstract sciences, such as biochemistry and physics. Union of all these forces will lengthen by many years the span of human life and as a byproduct will do much to improve professional ethics by overcoming some of the evils of competitive medicine.”

With these instructive and challenging remarks, Mayo highlighted the fundamental aims of the founders of The Cleveland Clinic: better care of the sick, investigation of their problems, and further education of those who serve. Although Mayo emphasized that The Cleveland Clinic was organized for “better care of the sick, investigation of their problems, and further education of those who serve,” he did not phrase it in such a succinct manner. The earliest documented use of this phrase was in 1941 on a plaque dedicated to the founders that was hung at the entrance to Crile’s museum and can now be seen in the lobby of the original Clinic Building.

On Sunday, February 27, 1921, the Clinic held an open house for some 1,500 visitors. On the following day it opened to the public, and 42 patients registered.

THE CLINIC’S WORK BEGINS

The public accepted the Clinic so enthusiastically that it soon became apparent to the founders that they needed an adjacent hospital, even though the staff continued to have hospital privileges at Lakeside, Charity, and Mt. Sinai hospitals. Crile had agreed with the trustees of Lakeside that he would retire as professor of surgery at Western Reserve in 1924, and Lower had consented to a similar agreement with the trustees of Mt. Sinai. Considering the prevailing attitude toward group practice and the corporate practice of medicine, there was ample cause for concern about whether the hospitals would continue to make available a sufficient number of beds to the staff of the new clinic.

With the prospect of being frozen out of hospital beds a real possibility, the Clinic purchased two old houses on East 93rd Street just



Oxley Homes, 1924

north of Carnegie Avenue and converted them into a 53-bed hospital, the Oxley Homes, named for the competent English nurse who was put in charge. In 1928, Lower wrote, “Dr. Crile suggested one day if we could get two houses near together on 93rd Street, not too far from the Clinic, we could fix them up and use [sic] for a temporary hospital. The suggestion was made at noon. At 2 P.M. a patient of Lower’s—a real estate agent—came in to see him professionally. After dispensing with the professional visit, Lower incidentally asked if she knew of any property on 93rd Street which might be bought or leased—preferably the latter as we had no money. She said she would find out. She returned in an hour reporting that two maiden ladies down the street had two houses they would be glad to lease as they wanted to go to California to live. Lower gave the agent \$100 to go and close the deal. About 5 P.M. of the same day, Dr. Lower asked Dr. Crile about the property he thought he should have. He replied ‘Two houses near together on E. 93rd Street.’ Lower said, ‘I have them!’ Crile said, ‘The hell you have!’ Thus closed the second land deal on 93rd Street and the first step in the formation of a hospital.”

Another house was used by Dr. Henry John to treat diabetes, not easy in those days, since insulin had just been discovered and reactions to it were not yet well understood. A fourth house, “Therapy House,” was used for radiation therapy, and a fifth for serving luncheons to the medical staff.

At first, Oxley Homes was considered to be essentially a nursing home. Soon, however, an operating room for major operations was installed. This presented some difficulties because there were no elevators in the buildings. Orderlies, nurses, and doctors had to carry patients up and down the stairs of the old houses. In the meantime, plans were made to build a modern 184-bed hospital on East 90th Street. It opened June 14, 1924, and Miss Charlotte E. Dunning was put in charge. The seventh floor contained operating rooms, living quarters for several residents, and anatomic and clinical pathology laboratories. Although 237 beds were now available, between the Oxley Homes and the new hospital, the demand for beds continued to exceed the supply. Two years later two floors of the Bolton Square Hotel, located one block west on Carnegie Avenue, were equipped for the care of 40 medical patients.

With the successful completion of the Hospital building in 1924, the Association Building Company had fulfilled its useful life. It had provided the founders with the legal and financial means to construct both the clinic and hospital buildings. Since 1921, the Clinic had gradually bought up the stock of the Association Building Company. By December 31, 1925, the Clinic owned all common and preferred shares that had at one time represented equity in the old Association Building Company. The founders instructed Daoust to merge all interests into The Cleveland Clinic Foundation. The Association Building Company passed out of existence. Its assets formed the nucleus of an endowment fund that was used to help support research and to finance the charitable services of the organization.

The Cleveland Clinic's experience with hospital beds can be summarized in the phrase, "too few and too late." By 1928, the shortage was again acute, and construction began on an eastward extension of the Hospital to 93rd Street to provide a total of 275 beds, excluding Oxley Homes and the hotel rooms. Increasing need for supplementary services necessitated installation of a machine shop in a penthouse atop the Clinic building and construction of a power plant, laundry, and ice plant. Parking of cars became increasingly problematic, and the Clinic bought and razed a number of nearby houses to provide space. Lower wrote: "The purchase of these . . . houses created a land boom on 93rd Street between Euclid and Carnegie Avenue and no other property was for sale at the

prices paid for the parcels already purchased When we decided to build a hospital unit, we had an agent buy land on East 90th Street, ostensibly for garage purposes. We succeeded in getting enough land on East 90th Street for the first unit of the Cleveland Clinic Hospital. From then on trading in land became an interesting game of chess for the Clinic and the property owners on East 93rd Street between Euclid and Carnegie.”

By 1928, the biophysics laboratory in the Clinic building had become inadequate because of the expansion of research, and a narrow, eight-story research building was constructed between the Hospital and the Clinic.

In that same year, Bunts, who had appeared to be in good health and had been carrying on his practice as usual, died suddenly of a heart attack. The event saddened all who knew him.

At a special meeting of the Board of Trustees on Wednesday December 5, 1928, the following resolution was passed:

“Resolved: That we, members of the Board of Trustees of The Cleveland Clinic Foundation, wish to place on record our appreciation of our association with Dr. Frank E. Bunts, who died November 28, 1928.

“Dr. Bunts was one of the four members who laid this Foundation, and who helped to carry it forward to its present condition of power and of influence. The relations of its members to each other have been long and intimate. To one, that relation covered more than two score years of precious meanings. With the others, either through professional or professional co-working, he held closest relations. To another, Dr. Bunts was a father by marriage.

“In Dr. Bunts were united qualities and elements unto a character of the noblest type. Richly endowed in intellect, he was no less rich in the treasures of the heart. Dr. Bunts had an outspoken religion which was evident in his daily life. His intellectual and emotional nature gave support to a will which was firm without being unyielding, forceful yet having full respect for others’ rights. He graciously gave happiness to others, as well as gratefully received happiness from them. His smile, like his speech, was a benediction. A sympathetic comrade, he shared others’ tears and others’ anxieties, and still he



Cleveland Clinic Hospital, East 90th Street (photographed 1930s)

was glad and hopeful. Faithful to the immediate duty, his interest was world-wide, covering seas and many lands. Recognized by his professional colleagues as of the highest type of excellence and of service, he was yet humble before his own achievements. Richly blessed in his own home, he helped to construct and reconstruct other homes ravaged by disease. Gratitude for his rare skill and for the gentleness of his devoted ministries is felt in thousands of lives restored unto health and usefulness. He loved people and was loved as very few men are by the multitudes.

“His thoughtful judgment and rare kindness was always evident at Board meetings, and his gracious manner will ever be remembered.

“If, however, we would see his monument, we ask ourselves to look about. Seeking for evidence of the beauty of his character, of the happiness which he gave like sunshine, or of the usefulness of his service, we turn instinctively to our own grateful, loving and never-forgetting hearts.” [Punctuation in

the foregoing quotation has been edited.]

During the memorial meeting held in the Clinic auditorium to honor Bunts's memory, Dr. C. F. Thwing, president of Western Reserve University and a member of The Cleveland Clinic's Board of Trustees, remarked that Bunts had always been "responsive, heart to heart, mind to mind, and added to this responsiveness was a constant sense of restraint; he never overflowed; he never went too far. There was an old set of philosophers called the Peripatetics who were of this type. He held himself together. He was a being in whom integrity had unbounded rule and control."

Fortunately, the expanding workload of the Clinic had enabled Bunts to appoint a young associate whom he had taught in medical school and residency and who now stood ready to take over his practice. This was Dr. Thomas E. Jones, who was destined to become one of the most brilliant technical surgeons of his time.

In response to continually rising demand for both outpatient and inpatient services, the Clinic increased the professional staff and strengthened the existing departments. Using the remains of the building fund, the Clinic purchased a gram of radium and installed a radium emanation plant. This plant made radon seeds for use in the treatment of cancer in the Therapy House. This was the first such plant in the region. In 1922, the Clinic also added an X-ray therapy unit of the highest available quality and put Dr. U. V. Portmann, a highly trained specialist in radiation therapy, in charge. Portmann, in conjunction with Mr. Valentine Seitz, the brilliant engineer who headed the machine shop, and Otto Glasser, Ph.D., of the Biophysics Department, made the first dosimeter capable of accurately measuring the amount of radiation administered to a patient. Jones, who was by then on the surgical staff, had received special training in the use of radium and radon seeds and was well prepared to take advantage of the new radiation facilities.

The Clinic also added new departments, including endocrinology, which was still in its infancy but growing fast. At the same time, surgery was becoming more and more specialized, requiring the formation of such departments as orthopedic surgery and neurological surgery. The Clinic took full advantage of the development of the specialties and of the prosperity that characterized the '20s. The future appeared bright, and life was good.

3. THE DISASTER

1929

BY ALEXANDER T. BUNTS

That which does not kill me makes me stronger.

—Nietzsche, 1888

THE EXPLOSIONS

ON WEDNESDAY, MAY 15, 1929, IN THE COURSE OF WHAT BEGAN AS A normal, busy working day at the Clinic, disaster struck, resulting in great loss of life and threatening the very existence of the institution. Incomplete combustion of nitrocellulose X-ray films, which at that time were stored in an inadequately ventilated basement room of the Clinic building, generated vast quantities of toxic fumes, including oxides of nitrogen and carbon monoxide. At least two explosions occurred. Toxic gases permeated the building, causing the deaths of 123 persons and temporary illness of about 50.

The first explosion took place about 11:30 A.M. when about 250 patients, visitors, and employees were in the building. Fire did not present a major threat because the building was fireproof. The danger lay in inhalation of toxic gases. The occupants of the nearby research building and hospital experienced no problems. A fire door closed the underground tunnel connecting these buildings, confining the gas to the Clinic building.

The room in which old films were stored was located on the west side of the basement next to the rear elevator shaft. There was direct communication between this room and a horizontal pipe tun-



The Disaster, May 15, 1929

nel or chase, which made a complete circuit of the basement and from which nineteen vertical pipe ducts extended through partitions to the roof. These provided the principal routes for the passage of gases throughout the building.

Old nitrocellulose X-ray films, still in use despite their known safety hazards, were stored in manila envelopes (averaging three

films to the envelope), on wooden shelves and in standard steel file cabinets. No one knew the exact number of films in the room, but it was estimated that there were about 70,000 films of all sizes, equivalent to about 4,200 pounds of nitrocellulose. Some estimates were as high as 10,000 pounds. Water pipes and three insulated steam lines were located below the ceiling of the room. One steam line, pressurized at about 65 pounds per square inch, passed within seven and one-half inches of the nearest film shelf. The room had no outside ventilation. Electrical wiring was in conduit, and there were several pendant lamps. There were no automatic sprinklers.

Several hours before the disaster, a leak had been discovered in the high-pressure steam line in the film storage room. A steam fitter, who was called to make repairs, arrived about 9:00 A.M. and removed about 14 inches of insulation, allowing a jet of steam about three feet long to issue from the pipe in the direction of the film rack against the north wall. He went to the power house to close the steam line and then returned to his shop to allow the line to drain and cool. Upon returning to the film room about 11:00 A.M., the workman discovered a cloud of yellow smoke in one upper corner of the room. He emptied a fire extinguisher in the direction of the smoke, but was soon overcome by the fumes and fell to the floor. Revived by a draft of fresh air, he crawled toward the door on hands and knees. A small explosion flung him through the doorway into a maintenance room, where another workman joined him. Together they made their way through a window and out of the building. Another explosion occurred while the men were still at the window. The custodian spread the alarm.

EMERGENCY AND RESCUE

Alarms were telephoned in from several locations. The first was officially recorded at 11:30 A.M., and two others were recorded by 11:44 A.M. A fire company based on East 105th Street just north of Euclid Avenue was the first to respond. When it arrived, most of the building was obscured by a dense, yellowish-brown cloud. Two more alarms brought more fire-fighting equipment

and rescue squads. Ladders were raised on each side of the building in an effort to reach and evacuate the people who appeared at the windows. About eight minutes after the arrival of the first fire company, an explosion blew out the skylights and parts of the ceiling of the fourth story, liberating an immense cloud of brown vapor and partially clearing the building of gas. Rescue work then began in earnest. Firemen and volunteers manned stretchers, removed people from inside the building, and helped them down the ladders. A rescue squad wearing gas masks tried to enter the front door on the north side but was forced out of the building by the concentration of gases. Battalion Chief Michael Graham and members of Hook and Ladder Company No. 8 entered the building from the roof. Fire hoses were trained on the flaming gas visible through windows in the rear stair shaft and some of the basement windows.

Many people died trapped in the north elevator and in the north stairway. Descending the stairway in an effort to escape through the Euclid Avenue entrance, they encountered an ascending mass of frantic people who had found the ground-floor entrance blocked by flames. Many died in the ensuing melee. Some reached safety by going down ladders from window ledges. Others, by climbing up through the broken skylight, made it to the roof of the building and then descended by ladder to the ground.

Dr. A. D. Ruedemann, head of the Department of Ophthalmology, perched on the ledge of his office window on the western side of the fourth floor and supported himself by holding a hot pipe inside the room. He managed to grab a ladder when it reached his level and made his way to the ground.

Dr. E. Perry McCullagh has left the following account:

“It was customary in those days for one of the Staff or a Fellow to accompany the patient to another department. I had gone to the front of the fourth floor with a lady and had introduced her to Dr. Ruedemann. As I approached the balustrade, I heard a rumbling explosion and saw a high mushroom of dense rust-colored, smoke-like gas arise from the center ventilator. I thought at first of bromine. It was clear to me that the masonry building could not burn and that the staff should help the people out and avoid panic.

“The ventilating system connected the basement with all the rooms individually, so that within a minute or so they were filled with the poisonous smoke. The elevator near the front stair was stopped when someone in the power house turned off the electricity, and those in the crowded elevator died. The front stairway was crowded with frightened, choking people beginning to panic. Those near the bottom were shouting, ‘Go back, you can’t get out here—there’s fire down here.’ There were flames across the front doorway where the partially oxidized fumes met the oxygen of the open air. Most and perhaps all of the people who remained in the stairway died there. A few escaped through the skylight to die later, as did the neurosurgeon, Dr. C. E. Locke, Jr.

“I left the stairway and went into the thick gas on the fourth floor. Those who reached an open window on the west were pretty well off because the breeze was from that direction. I stumbled against a door on the east corridor, and Dr. Edward Sherrer, who was then a young staff member, pulled me in and helped me to hang my head out of the window, which did little good as the fumes were mushrooming out the window. With the help of firemen we were able to get down one of the first ladders to be put up.

“After helping with what emergency care could be given in our own hospital, we searched for our friends, some of whom were alive and many dead at Mt. Sinai Hospital. Many were located at the County Morgue; others were visited at their homes. Dr. Sherrer and I were admitted to the Cleveland Clinic Hospital late that evening with shortness of breath, very rapid respirations and cyanosis. After a few days in oxygen tents, we were discharged, only to be readmitted about ten days after the disaster, and were in oxygen tents again for most of six weeks. This relapse was the result of interstitial edema of the lungs which occurred late in all of those who were badly gassed but survived the first few days.

“Among many of us who were most severely ill, courage and calmness seemed to play an important role in recovery. The lack of oxygen caused loss of judgment and encouraged restless activity, so that those who fought against instructions and the use of oxygen died. The courage and complete disre-

gard of fear in the case of my roommate, Dr. Conrad C. Gilkison, was amazing. We both believed we were dying because everyone up to that time who had developed cyanotic nail beds had died, and we could see our blue nails plainly enough. At 1:00 or 2:00 A.M., both of us unable to sleep, Gilk said 'Perry, if you're here in the morning and I'm not, get old Bennett to take me to the ball game.' Mr. Bennett was the undertaker at the corner of East 90th and Euclid Avenue, a block from where we lay.

"Dr. Sherrer, Dr. Gilkison and I were finally able to return to work about November 15. Recovery of pulmonary function was complete."

During the confusion of that tragic morning, those trapped within the building were unaware of the nature of the gas that filled the halls, corridors, and examining rooms. They only knew that it severely irritated the throat and lungs, causing coughing and difficulty breathing. Those who reached the examining rooms at the sides of the building and closed the doors behind them had a chance of survival. They opened the windows widely and leaned into the fresh air. When the ladders reached them, many made their way safely to the ground. A few jumped. Dr. Robert S. Dinsmore of the Department of Surgery broke his ankle leaping from a second floor window on the east side of the building.

A number of non-Clinic physicians came to the hospital and spent many hours assisting members of the Clinic staff with their overwhelming task. Many survivors were cyanotic and short of breath, and it rapidly became evident that the problem was toxic gas inhalation. Respiration became more difficult, cyanosis increased, and severe pulmonary edema developed. Fluid caused by gas-induced irritation of the airways filled the pulmonary alveoli. Many of these persons, including Locke and Hunter, died in two or three hours. Edgar S. Hunter, M.D., was a neurosurgery resident working with Dr. Locke. Some died later that afternoon or that night, among them Mr. William Brownlow, artist, and John Phillips, one of the Clinic's founders and head of the medical department. Phillips had reached the ground by a ladder on the east side of the building. He sat for a while on the steps of the church across 93rd Street and finally was taken by car to his apartment at the Wade Park Manor on

East 107th Street. There his condition worsened as the afternoon wore on. About 7:00 P.M. a transfusion team, headed by Crile, went to his room and performed a transfusion, but to no avail. Phillips died at about 8:30 P.M. He was only 50 years old, and the loss of such a talented physician and leader was a particularly sad event for the Clinic and for Cleveland's medical community.

In his book with the grisly title *They Died Crawling and Other Tales of Cleveland Woe* (Gray & Company, Cleveland, 1995), John Stark Bellamy, II, noted "Dr. Crile himself was at his best throughout the disaster, a veritable battlefield general who tirelessly marshalled [sic] resources to heal the wounded and console the grieving."¹

On the day after the disaster, Dr. Harvey Cushing, a distinguished neurosurgeon in Boston and an old friend of Crile's, arrived in Cleveland to offer his services. Locke, his former assistant, who was the first neurologic surgeon on the Clinic staff (1924-1929), had died of gas inhalation the previous day. Crile asked his first assistant, Dr. Alexander T. Bunts, to take Cushing around the hospital to see those with any possible neurologic injuries.

A few days later, Crile wrote to all surviving family members who could be identified. For example, in a letter to Mr. A. Lippert of Barberton, Ohio, dated May 23, 1929, he wrote, "Because of our sad lack of definite information regarding the family connections of Mr. and Mrs. Carl Long, who lost their lives in the Cleveland Clinic disaster, we are asking you to extend to his family our deepest sympathy in their great sorrow. Only our duty to the surviving has kept us from giving them more promptly this assurance that we sorrow with them."

Crile and others who had had first-hand experience in treating gassed patients during the war in France commented upon the similarities of the clinical effects of the gas to those observed in soldiers who had inhaled phosgene gas (COCl_2) at the front. After the disaster, Major General Gilchrist, Chief of the Chemical Warfare Service, came to Cleveland and initiated a thorough investigation of its possible causes. Decomposition of the nitrocellulose film may have been caused (a) by the rise in temperature produced by the leaking and uncovered steam line, (b) by ignition of the film from an incandescent lamp attached to a portable cord close to the shelves, or (c) by a lighted cigarette on or near the films. None of these theories

was ever proved. The investigations conducted by the Chemical Warfare Service did determine the nature of the gases produced by the burning or decomposition of nitrocellulose films: carbon monoxide and “nitrous fumes” (NO, NO₂, and N₂O₄). Carbon monoxide breathed in high concentrations causes almost instant death. “Nitrous fumes,” which comprised most of the brownish gases, became nitric acid on contact with moisture in the lungs. This led to acute rupture of the alveolar walls, pulmonary congestion, and edema. The Clinic disaster resulted in worldwide adoption of revised safety codes for storing films and led to the mandatory use of safety film that would not explode.

A commemorative booklet, *In Memoriam*, was issued by the Board of Trustees in June 1929, eulogizing the victims of the disaster. It reads in part, “The integrity of the Cleveland Clinic Foundation could receive no more severe test than that of the recent disaster. Each member of the medical staff, as well as every employee in every department, has faithfully carried on his or her own task, knowing that the Clinic was not destroyed, but rather that from the ruins will arise an even better institution which will be dedicated as a sacred memorial to the dead.”

SORTING IT ALL OUT

After the disaster many problems confronted the two remaining founders. Miss Litta Perkins, executive secretary to the founders and the Board of Trustees and in whose photographic memory existed most of the records of the Foundation, had died. The Clinic building, although still structurally sound, could not be used. The interior was badly damaged, brownish stains were present everywhere, and there was a rumor that lethal fumes were still escaping. Some advised razing the building, fearing that patients would never again be willing to enter it. Lower and Crile, however, adopted a wise position. “They’ll talk for a while,” Crile said, “and then, when they forget it, we’ll start again to use the building.” That is exactly what happened.

A frame house that stood directly across Euclid Avenue from the Clinic had been used as a dormitory for the girls of Laurel School. This house was made available to the Clinic by Mrs. Lyman, head-

mistress of the school and a lifelong friend of Crile's. The house was transformed into a temporary clinic. For four days after the disaster, the staff and personnel of the Clinic worked unceasingly, aided by carpenters and movers and by a committee of civic leaders headed by Mr. Samuel Mather and Mr. Roger C. Hyatt. Desks, chairs, tables, lamps, x-ray equipment, files, records, and all other necessities were carried across Euclid Avenue and placed on all three floors of the loaned house. Telephone and power lines were installed. On Monday morning, May 20, 1929, just five days after the disaster, the building was opened for the examination of patients.

Liability insurance coverage for such carnage was inadequate, but it did provide eight thousand dollars per person plus funeral or hospital expenses. State industrial insurance gave what Crile termed "cold comfort" to the personnel. The medical staff, however, took on the task of paying the families of the members of the staff who died full salary for the first six months and half salary for the next six. The founders suffered no personal liability because the Foundation, which owned everything, was a nonprofit corporation of which the founders were salaried employees. Expressions of sympathy and offers of financial assistance were received from many Clevelanders as well as from colleagues or patients as far away as India, China, and Australia. More than \$30,000 poured in as gifts. Then Crile said, "When Lower and I found we still possessed the

¹ The sentiment of a Cleveland physician, Dr. Frank A. Rice, who was one of the many local doctors who helped in the efforts to save victims on the day of the disaster, is well expressed in the following letter addressed to Dr. Lower:

"May 18, 1929

"My dear Doctor Lower:

"Our hearts are wrung and we are bowed in sorrow over the loss of your associates, whom we have all learned to love and respect. We feel, too keenly, the pain it has caused you and those of your group who were spared, but we are justly proud of your undaunted spirit to carry on, and out of the ashes of yesterday to erect an institution bound by traditions, to be a worthy monument to lives and ambitions of its sturdy founders.

"I cannot let the opportunity pass without a word of praise and admiration for your nursing staff. I arrived at your hospital as the first of the injured were brought in. Throughout the day, and into the night, I have never seen, not even in 17 consecutive days in the Argonne, such perfect organization. With death increasing horror at every turn, your nursing staff functioned with alacrity, coolness and decision which marked them as masters of their art—truly a remarkable tribute to their institution and your years of instruction.

"Yours most sincerely,

"Frank A. Rice"

Another letter, this one to Dr. Crile, was from Boston's Dr. Ernest A. Codman, the father of quality assessment in medicine, excerpts of which follow:

"I am writing to ask a question.

confidence of the public, of our own staff, and of the members of our institution, we knew we could finance our own way. So, after holding these gifts for a few months of security, we returned them all with their accumulated interest.”

After operating in the Laurel School quarters throughout the summer of 1929, the equipment and functions of the Clinic were transferred in September to the newly completed addition to the hospital, which had just been extended to East 93rd Street. The rooms on several floors were arranged and equipped as examining rooms for outpatients. For the next two years the Clinic’s work was carried out here. Although the quarters were cramped, the patients continued to come in increasing numbers.

“I always think of you as an eagle able to look directly into the sun, looking down, perhaps, on the rest of us common birds, who are controlled by our sympathies, petty desires, and emotions.

“You have climbed the ladder of surgical ambition high into the skies of Fame. You have done more good by your introduction of blood pressure measurements, of transfusion, anoci-association, and gas-oxygen anesthesia than could be counteracted by the death of every patient who entered your clinic in a whole year. In the haste of your upward progress you have known that some wings would break and lives be lost.

“Now comes this accident which is not the least your fault, and which will do untold good, as every x-ray laboratory in the world will be safer for it.

“And now, my question: Since you have known both ‘Triumph and Disaster’—did you ‘treat those two Impostors just the same?’”

To this query Dr. Crile replied:

“Referring to our own terrible blow, the only thing that hurts me, and that will always be, is the loss of life. I saw nothing in France so terrible. It was a crucible. Almost four hundred people were in the building at the time.

“You have always been a close friend. I appreciate you, especially now.”

In the June 1929 issue of the *Bulletin of the Academy of Medicine of Cleveland* the disaster was acknowledged, and the following paragraphs summed up the Academy’s sentiments:

“The Academy of Medicine bows in sorrow with the rest of the city. The suddenness and tremendous import of it all was brought home to us all the more forcibly by the fact that five of our own members lost their lives. They were all men either prominent in their specialties or starting in on careers which promised well for themselves and for the profession.

“The Academy members who died in this disaster are as follows:

John Phillips, M.D.

C.E. Locke, Jr., M.D.

Harry M. Andison, M.D.

Roy A. Brintnall, M.D.

George W. Belcher, M.D.”

A later issue noted two additional deaths, those of Miriam K. Stage, M.D. (one of the leaders of Women’s Hospital), and J.H. Swafford, M.D. (radiology).

4. THE PHOENIX RISES FROM THE ASHES

1929-1941

BY ALEXANDER BUNTS AND GEORGE CRILE, JR.

*Fate loves the fearless;
Fools, when their roof-tree
Falls, think it doomsday;
Firm stands the sky.*
—James Russell Lowell, 1868

THE GREAT DEPRESSION

IN OCTOBER 1929, FIVE MONTHS AFTER THE DISASTER, THE STOCK MARKET crashed, heralding the Great Depression of the 1930s. It was at this time—with three million dollars of lawsuits filed not only against The Cleveland Clinic but also against Lower, Crile, and the estates of Bunts and Phillips—that the surviving founders decided to build a new three-story Clinic building with foundations to support fourteen stories (eventually known as the “S Building”). They planned to connect this new structure with the original Clinic Building, and to remodel the latter so that it would not remind people of the disaster. At the time of this decision, Crile was 66 years old and Lower was 63. They reasoned that if the court decision went against them and the Foundation, they would all go bankrupt, and there would be nothing to lose.

Crile and Lower did not think that there would be any liability. Storage of the films had been in accordance with the fire laws, and



Cleveland Clinic, 2020 East 93rd Street (Left to right): Hospital addition, 1929; Research Building, 1928; Main Clinic (three stories); Original Clinic Building (southeast corner showing), 1921 (Photographed in 1935)

the fumes from films had not been recognized as potentially fatal. In 1928, however, eight persons had died in a similar fire in Albany, New York. Suffocation was believed to have been the cause of several of those fatalities.

The two founders started to raise money for the new building with trepidation, facing the difficulties posed by this task. "Every day Ed and I spent the lunch hour in the board room discussing them," Crile wrote. "I was able to convince Ed that we would weather our difficulties; but the next day he would appear so exhausted and excited over a new angle, which had occurred to him while he was fighting out the lawsuits overnight, that I told him if someone struck a match near him he would explode. But he was always a joy, appearing one morning with the suggestion that perhaps there would be Christian Scientists on the jury."

From a professional standpoint, 1929 was a good time to start building. The earnings of both Crile and Lower were at their peak. Phillips, lost in the disaster, was replaced as head of the medical department by Dr. Russell L. Haden, a nationally known physician

from the University of Kansas. He began to develop subspecialty departments in internal medicine and soon accumulated a large practice in his own specialty, diseases of the blood. There were able young physicians in all departments, and the reputation and practice of the Clinic were growing rapidly. Indebtedness and the voluntarily assumed burden of paying the salaries of the staff members who had died in the disaster made it difficult to meet the payroll, and Lower once sent a telegram to Crile, who was attending a meeting in New York, "Just across without reserve."

The financial success of the Clinic at this time depended mainly on the fact that some of the physicians' earnings were more than four times as great as their salaries, the excess going to the Foundation. But in order to borrow the \$850,000 required for the new building, Crile and Lower had to put up their personal life insurance policies to guarantee \$150,000 of the loan. Three million dollars in lawsuits resulting from the disaster were settled out of court for about \$45,000, for the pragmatic reason that The Cleveland Clinic had no liquid or negotiable assets that would make it worthwhile for the plaintiffs to bring the cases to court.



Aerial view of The Cleveland Clinic (Euclid Avenue at right) in 1931

In September 1932, in order to help repay the debt incurred by the disaster and the cost of the new building, all employees, including the medical staff, took a 10 percent pay cut. This financial curtailment was accepted graciously, if not enthusiastically, because everyone was aware of the Clinic's crisis. At that time, no one predicted the severity of the Great Depression that would cloud the years to come. Instead, there was a confident expectation about the future.

"Late in February 1933, while Grace and I were attending a dinner in Cleveland," Crile wrote in his autobiography, "one of the guests, a prominent industrialist and director of one of Cleveland's largest banks, was called to the telephone just as we were seated. He did not return until dinner was nearly over and, when he returned, he seemed deeply perturbed, was without conversation, and soon left." The next day the Maryland banks closed; the following day most Cleveland banks announced that only 5 percent withdrawals were allowed. The economic depression deepened. The banks failed while the Clinic was still heavily in debt. A second 10 percent reduction in salaries had been necessary one month before the banks closed. Four months later there was an additional 25 percent cut. Circulating money had almost ceased to exist, but its absence did not impede the incidence of disease. The sick still required treatment, and somehow many of them managed to pay something for it. The staff and employees remained loyal; their choice, in those days of unemployment, lay between a low-paying job and no job at all. Crile wrote in 1933, "[T]he one abiding comfort, as I looked at our beautiful cathedral for service, was that during the years that I had needed least and could give most I had been able to earn in such excess of my salary that we had been able to accomplish that of which we had dreamed."

The Clinic survived.

GROWTH AND MATURATION

In 1934, the depression was still in its depths. Although Crile was then 70 years old, his surgical practice continued to provide a major part of the Clinic's income. His interest had gradually shifted from thyroid surgery, which had attracted patients from all over the world, to surgery of the adrenal glands, a field that he was exploring to treat such diverse conditions as hypertension, peptic ulcer, epilepsy,

hyperthyroidism, and neurocirculatory asthenia. The results of these operations were sometimes promising, but rarely spectacular. The field was so controversial that Crile's personal practice began to shrink. During that time he underwent surgery on his eyes for glaucoma, and soon thereafter he began to develop cataracts.

Fortunately, Crile had able young associates in the Department of Surgery, including Dr. Robert S. Dinsmore, who continued his interest in surgery of the thyroid and breast, and Dr. Thomas E. Jones, who had already become nationally famous for abdominal surgery, particularly for cancer of the rectum and colon. The surgical specialties were headed by capable surgeons, and under Haden's leadership, the Department of Medicine was expanding rapidly. Therefore, Crile began to disengage himself from conventional surgery and to spend more of his time researching the energy systems of man and animals, traveling twice to Africa to collect and study the brains, thyroids, and adrenals of various species of African wildlife.

Crile's research into the energy systems of animals was supported in part by an endowment received from Sarah Tod McBride. In 1941, the Museum of Intelligence, Power, and Personality was built adjacent to the old Clinic Building, to exhibit the specimens that Crile had collected. Dr. Alexander T. Bunts wrote in 1965, "Many parties of school children visited the museum and were fascinated by the mounted specimens of lion, alligator, elephant, gazelles, giraffe, shark, porpoise, manatee, zebra, and many other interesting creatures. Models of the hearts of race horses and whales, fashioned of paraffin or plaster, and wax models of the sympathetic nervous systems, brains, thyroids, and adrenal glands attracted the interest of the curious and challenged the logical thinking of visiting scientists and physicians Those of us who were working at the clinic in those days were never surprised to encounter a dead lion or alligator in the freight elevator of the Research building or occasionally even a live one, as well as a battery of vats filled with viscera of various animals. In the study of this material, emphasis was placed on the relative weight of thyroid, adrenals, liver, and brain, and the complexity of the autonomic nervous systems."

Mr. Walter Halle, later to become one of the Clinic's trustees, recalled the following episode:

"I got a call from Doctor Crile one day asking if I would come down to the Clinic and serve in some sort of protective

capacity, armed with my Mauser 3006, while they were attempting to uncrate a lion sent to him from the Toledo Zoo. The lion was brought up on an elevator in a cage, in a very irritable condition, and moved into the room where he was supposed to be dispatched in some fashion that had not been too thoroughly worked out. After much thrashing around the lion was quieted and someone gave him a shot to put him away peacefully. I hesitate to think what would have happened had the lion broken out of the cage, which he was attempting to do. Fortunately for everyone we did not have to use our firearms because firing a high-powered rifle in a room 14 x 18, with Doctor Crile and three other doctors, would have made it problematical just who would get drilled.

“I can’t tell you what an interesting session I had afterwards watching him dissect the lion and listening to his marvelous running-fire commentary about the glands and various parts of the anatomy.”

On the way home from Florida in 1941, Dr. and Mrs. Crile and the Clinic’s anatomist, Dr. Daniel Quiring, were injured when their airplane hit a tornado and crashed in a swamp near Vero Beach.

“It had been a great day, a manatee was dissected and cast,” Dr. Crile wrote, “and we had also stored away in jars the energy organs of a marlin, a sailfish and a barracuda, so we decided to take the early morning plane to Daytona Beach, visit Marineland and catch our train at midnight. This was Quiring’s first flight.

“When the steward told us that there were a few thunderheads beyond, Grace remarked that Quiring was going to see a little of every kind of weather. We had left the usual beach route and were flying over marshland that looked like the waterhole country in Africa. The mist became thicker. Suddenly I was conscious of an abrupt vertical upsurge; we had entered the thunderheads and were shrouded in darkness and a violent hail storm, pierced by zigzag lightning that flashed from every bit of metal in the plane. We must have resembled a Christmas tree hurling through space.

“A deafening roar as of a high pressure wind under a pow-

erful drive beat on our ear drums. Blankets, hats, pillows, trays were sucked to the ceiling, then flew in all directions about the cabin. I did not suspect it at the time but we were in an active tornado and were actually observing its mechanism at work. The plane seemed to be whirling. Blackness spun before my eyes. Everything was tipping—I recall how difficult it was to pull my tilting body to the left.

“A lurch! A feeling of gratitude that Grace got off our manuscript to the publisher. Then oblivion!”

Quiring’s shoulder was dislocated; Grace Crile suffered two broken ribs, a broken sternum, and a cracked vertebra; and Crile, the most seriously injured of any of the passengers (his seat was at the point where the plane buckled), had three fractures of the pelvis, three broken ribs, and fractures of the transverse processes of two vertebrae as well as severe contusions. Despite these injuries, he was the first to break the silence after the crash. As the chill marsh mire began to rise in the cabin he imagined himself at home in a bathtub. “Grace,” he called to his wife, “Grace, would you mind turning on the hot water please?”

Miraculously, no one in that accident died. Crile then made the following observation: “After the experience of everyone in the plane it seems clear to me that the cause of the blackout in aviation must be the failure of the blood to return to the brain and the heart because of the rapid ascent of the plane. Had I been standing on my head or lying flat with feet elevated and head down—the position used in surgical shock when the blood pressure fails, probably I would not have lost consciousness Were an aviator encased in a rubber suit and the pneumatic pressure established, the suit in itself would prevent the pooling of the blood in the large vessels in the abdomen and extremities and would maintain the conscious state. I believe that an aviator thus equipped would be protected against the failure of the blood to return to the heart and hence would have protection against blackout.”

Crile thought of the pneumatic suit that he had developed years before to treat shock. Why not use such a suit to prevent blackouts that occurred when pilots “pulled out” after dive-bombing? The suggestion was passed on to appropriate officers in the Army, Navy, and Air Force. Crile at the age of 77 was made an honorary Consultant to



Henry S. Sherman, President, The Cleveland Clinic Foundation, 1941-42

the Navy, and in cooperation with engineers of the Goodyear Tire and Rubber Company produced the first G-suit for military use.

Although Crile had remained president of The Cleveland Clinic until 1940, more and more of the executive duties had been turned over to an Administrative Board composed of four staff physicians. They were responsible for the professional aspects of administration. The Board of Trustees, then composed exclusively of laymen, was responsible for properties and finance. Prosperity had returned to the country, and it seemed that the Clinic was out of its financial straits. But there were still other

troubles ahead, many of them arising from conflicts of personalities.

For the Clinic, governed as it had been by the founders for many years with no thought of succession planning, the transfer of authority was bound to be difficult. As the old leaders faltered or stepped down, there ensued a struggle for power among the next generation of leaders. As Dr. Joseph Hahn put it many years later under similar circumstances, "Let the games begin!" It was at this point that the Board of Trustees, which had previously acted mainly in support of the founders' decisions, showed their value. Without them it is doubtful that the institution could have survived. Much of that part of the history of the Clinic is recounted later. It is sufficient to say here that able physicians and surgeons are not necessarily the best administrators.

By 1940, Crile's eyesight was failing badly, and he retired from the position of president of the Clinic. His brother-in-law, Mr. Henry S. Sherman, a former industrialist who at the time was president of the Society for Savings (a Cleveland financial institution) and one of the Clinic's trustees, succeeded him as president. Sherman married Crile's sister-in-law, Edith McBride. He was a trustee of The Cleveland Clinic Foundation from 1936 to 1956. He is remembered

not only for his wise counsel in the affairs of the Clinic but also for his friendly concern for the professional staff, many of whom he knew personally. Sherman's son-in-law is James A. Hughes, who was chairman of the Board of Trustees from 1969 to 1984 (with the exception of a two-year interruption from 1973 through 1974). Although Lower was still active in an advisory capacity in 1940, he, too, was by then in his seventies and was equally anxious to turn over the administrative responsibilities to the next generation.

Three years later, Mr. Edward C. Daoust, who had participated so effectively in the founding of the Clinic, was elected to the full-time presidency of the Foundation. Sherman became Chairman of the Board of Trustees.

The Cleveland Clinic had been growing steadily ever since the financial depression began to lift, and the number of employees had increased from 216 in 1930 to 739 in 1941. In September 1941 the Foundation was able to repay the last \$180,000 of its indebtedness. The founders then relinquished the last of their administrative duties with the comment, "The child has learned to walk." But the road still led uphill.



Edward C. Daoust, LL.B., President, The Cleveland Clinic Foundation, 1943-1947

5. TURBULENT SUCCESS

1941-1955

BY ALEXANDER BUNTS AND GEORGE CRILE, JR.

The dogs bark, but the caravan moves on.

—Arabic Proverb

THE TORCH PASSES

ALTHOUGH THE “CHILD” WAS WALKING, THE PROBLEMS OF ADOLESCENCE still had to be met. No firm leadership, autocratic or democratic, capable of replacing that of the founders had as yet developed. The dominant personalities on the staff were men like Dr. William V. Mullin, head of the Department of Otolaryngology; Dr. A. D. Ruedemann, head of the Department of Ophthalmology; Dr. Russell L. Haden, head of the Department of Medicine; and Dr. Thomas E. Jones, who replaced Crile as head of the Department of Surgery in 1940. Problems arose as a result of the conflicts among these brilliant and competitive personalities. Sadly, some of their arguments were settled by Mullin’s untimely death in 1935 and by Ruedemann’s resignation from the Clinic in 1947.

One factor that helped to distract attention from the difficulties of the early 1940s was the sheer weight of work. The military draft had reduced the staff by more than 20 percent and the number of residents by one third. Since most of the young physicians in the area had been drafted, many of their patients came to the Clinic. Surgical schedules and new patient registrations rose to an all-time high. In 1942 there were 21,500 new patients, and by 1944 the num-

ber had increased to 27,900. Everyone was too busy to spend much time discussing administrative affairs. Daoust was an effective and respected chief executive, and Sherman, chairman of the Board of Trustees, had a unique insight into the problems of the Clinic in which he had been interested since its inception.

The Clinic's Naval Reserve Unit was called to active duty in the spring of 1942. Two months of training were spent on Pier No. 14 of the Brooklyn Naval Yard in New York, a bleak, barn-like structure in which, as Crile, Jr., recalled, there was very little to do but read *The New York Times*. The Unit then sailed for New Zealand to establish Mobile Hospital No. 4, the first of its kind in the South Pacific. In the Unit were Drs. George Crile, Jr., William J. Engel, A. Carlton Ernstene, W. James Gardner, Roscoe J. Kennedy, Joseph C. Root, William A. Nosik, and Edward J. Ryan, as well as Guy H. Williams, Jr. (a neuropsychiatrist from City Hospital, Cleveland), and Don H. Nichols (a Cleveland dentist).

Construction of the portable hospital, all of which was shipped from the United States, was a race against time, for the landing on Guadalcanal was being planned, and there would have to be a hospital ready to receive the casualties. For three weeks, the physicians and corpsmen labored in the mud of a cricket field on the outskirts of Auckland to put the hospital together. Marie Kennedy, widow of Dr. Roscoe "Ken" Kennedy, recalls that, "Someone accidentally walked across what was to be the ceiling of a large ward, from one corner to another. The footprints dried, and they wouldn't come off. That turned out to be the ceiling of a psychiatric ward! Allegedly the admiral said, 'If you weren't nuts when you were brought in, you would be nuts when you came out!'"

Miraculously they succeeded and were ready when the hospital ship *Solace* brought its first load of wounded. Most of them had had excellent attention, and there was little left to do except give them convalescent care. But there was a lot to be learned about tropical diseases. A young Marine, strong and apparently well, fell sick one day and the next day was dead with convulsions and the meningeal manifestations of malaria. In his journal Kennedy noted, "What Sherman said about war ('War is hell') still holds."

Mobile Hospital No. 4 was based in New Zealand for 18 months and dealt more with tropical diseases and rehabilitation of the sick than with wounds. Thereafter its officers were dispersed to other

stations. As soon as the war was over, the Clinic physicians returned home. After their tours of active duty, the Clinic paid the returning men their full salaries less the amount paid them by the Navy.

Crile was 77 years old when the United States entered World War II. In 1940, after a cataract operation made difficult by a previous operation for glaucoma, he lost an eye. Remaining vision had failed to the point where he could no longer easily recognize people by sight, and he had become subject to occasional spells of unconsciousness. Crile then contracted bacterial endocarditis, and, after an illness of several months, he died in January 1943.

Lower expressed the feelings of many when he wrote on the occasion of Crile's death, "George Crile had a quest and a vision that he pursued throughout his entire adult life with a devotion amounting almost to mystic fervor. This is the striking thing that distinguished him from other surgeons and that gave special meaning to his life. He was not content to make use of known truths, but was forever searching for the answer to 'What is Life?' This was the stream into which his tremendous energies flowed, and all his activities and observations were purposeful and tributary to this."

Crile died with his major quest unfulfilled: he had failed to divine the unfathomable mystery of life. Nonetheless, he left The Cleveland Clinic, complete with its own hospital, research, and educational facilities, to stand as a memorial to its founders. The institution's prosperity in the early 1940s made possible many improvements in its facilities. There were troubles ahead, however, and tumultuous times were to characterize the late 1940s.

On January 1, 1943, Daoust retired from his law practice and became the full-time president of The Cleveland Clinic and its chief administrative officer, responsible to the trustees. He had been associated with the founders and the Clinic for more than 20 years. On that date, Sherman became chairman of the Board, and Mr. John Sherwin, whose activities as a trustee were to be so important to the Foundation through the years, joined Daoust and Sherman as the third member of a new executive committee of the Board of Trustees. In Sherwin's words, "While formal meetings were infrequent, luncheon meetings and telephone conversations took place often, and a closer rapport was established with the Administrative Board then composed of Daoust and Drs. Thomas Jones, Russell Haden, A. D. Ruedemann, W. James Gardner, and E. P. McCullagh."



John Sherwin, President, The Cleveland Clinic Foundation, 1948-1957

The Administrative Board referred to by Sherwin was established to represent the professional staff at the same time the new Executive Committee was established. The new Administrative Board had its first meeting in January 1943. The meetings of that body in earlier years have been described as always interesting and frequently almost frightening. Lower would sometimes leave the meeting trembling visibly. Impressions of the meetings of the Administrative Board were recalled by McCullagh, the youngest member of the Board.

“The original Medical Administrative Board was formed in February 1937, and was com-

posed of Dr. Crile, Dr. Lower, Dr. Russell Haden, Dr. Thomas E. Jones, Dr. A. D. Ruedemann, and Dr. Bernard H. Nichols with Mr. Edward Daoust attending. These were exciting meetings, for Dr. Ruedemann, Dr. Jones, and Dr. Haden often reacted suddenly. Sometimes this, added to a hot temper, would threaten physical violence. Drs. Haden and Jones, it seemed to me, always disagreed, apparently on general principles. Dr. Ruedemann had no favorites, disagreeing with everyone in turn. This concerned Dr. Crile and Dr. Lower very much, and I’m sure caused them anxiety for fear that no plans for satisfactory Clinic administration were evolving.”

The two most powerful figures on the Administrative Board in the 1940s were Jones, Chief of Surgery, and Haden, Chief of Medicine. According to Mrs. Janet Winters Getz, who attended some of the meetings of the Administrative Board in a secretarial capacity, it seemed that these two brilliant and attractive men had agreed to disagree. Sometimes their shouting could be heard over the entire floor. Often the fiery Ruedemann would add his bit. He was a particularly colorful and outspoken man, as exemplified by a story that is told about him when he was in medical school. When asked

about the blood count of a patient with leukemia, he reported that the white cell count was 500,000. "Did you count them?" his professor asked. "Hell no, I weighed them," said Ruedemann.

SUCCESS AND MATURATION

During the war and immediately thereafter, the Clinic enjoyed prosperity and reached professional maturity. Specialization was increasing in both medical and surgical divisions. New patient registrations continued to increase, rising to 31,504 by 1947, nearly three times the number served a decade earlier. This growth necessitated further building, and seven stories were added to the new Clinic building in 1945. One year later, a wing was added to the hospital, connecting it to the research building. Few beds were added by the new wing, however, as much of the space was taken up by elevator shafts designed to serve future additions. The turbulence of the post-war years required the steady hand of Daoust in administering the growing organization, and his accidental death in June 1947 was a serious blow to the Foundation. The airliner on which Daoust was a passenger crashed into a mountaintop. All on board were killed.

The trustees promptly confronted the administrative crisis precipitated by Daoust's death. Sherwin's own account states that on the morning following the airplane crash, Lower, Sherman, and Sherwin met to determine how to best assume Daoust's responsibilities. There had already been many discussions about how to administer the organization after its founders retired. Conversations had taken place with the management consulting firm of Booz, Allen and Hamilton with an idea of engaging that firm to study the Clinic and its operations and to make recommendations.

Sherman, Sherwin, and Lower agreed to recommend to the Board of Trustees that:

- the position of president would be left vacant for the time being;
- the responsibilities of the president would be assumed by the Executive Committee;
- Sherwin would become chairman of the Executive Committee;
- recently elected trustees John R. Chandler, Benjamin F. Fiery, Walter M. Halle, and John C. Virden would join Sherman and Sherwin on the Executive Committee;

- the Executive Committee in conjunction with the Administrative Board would employ Booz, Allen and Hamilton to make a study and recommend (a) how the Foundation should be administered and (b) how the compensation of the professional staff should be determined.

These recommendations were adopted by the Board of Trustees on June 26, 1947, and a new Administrative Board composed of Drs. Dickson, Ernstene, Gardner, Jones, and Netherton was appointed. That same day the staff assembled to learn of these actions.

During the ensuing four months, the Executive Committee and Administrative Board met almost weekly, usually from five o'clock in the afternoon through dinner and on to ten o'clock or later. Representatives of Booz, Allen and Hamilton attended most of these meetings. They reviewed the entire operation of the institution and developed a plan for the organization and operation of the Foundation. The plan of August 14, 1947, had the unanimous support of the trustees and the Administrative Board. It was during the last year of Lower's life that Booz, Allen and Hamilton gathered data for their report to the trustees.

The idea of spending money for this sort of thing annoyed Lower, and ever the frugal and conservative founder, he finally refused to talk with the management consultants. Mrs. Janet Winters Getz, who at that time served as Dr. Lower's secretary, stated that he refused to allow their representatives on his floor or to permit any of the personnel on his corridor to talk with them. Yet the firm's report, when it finally came, was constructive. Although it was not accepted in full (the staff was opposed to the suggestion that there be a medical director), it paved the way for the development of a committee system. The death of Lower in June 1948 at the age of 80 years severed the last of the personal ties to the origins of the Clinic. The era of the founders had passed, and the Clinic was on its own.

During these sessions, everyone realized the need for an administrative head. A search started for such a person, and, in October, Mr. Clarence M. Taylor, recently retired as executive vice president of Lincoln Electric Company, was invited to become executive director. He assumed the office on January 1, 1948, but spent the balance of 1947 acquainting himself with the Booz, Allen and Hamilton report and the Clinic's operations. Sherwin continued to handle the duties and responsibilities of executive director until Taylor's arrival.

The new plan of organization and operation and the appointment of Taylor were announced at a special meeting of the staff on September 19, 1947. Jones described the plan as the staff's "Magna Charta" and the new executive director as a "welder—formerly of metals, now of people." Both statements proved to be accurate. On September 19, 1947, the Executive Committee, in cooperation with the Administrative Board, made appointments of professional administrative officers: (1) Thomas E. Jones, chief of staff, surgery; (2) Russell L. Haden, chief of staff, medicine; (3) Irvine H. Page, director of research; and (4) Edwin P. Jordan, director of education. A professional policy committee was organized to "consult with, advise and make recommendations to the Board of Trustees or the Executive Committee on major professional policies regarding the operation and activities of the hospital and the clinical, research, and allied departments of the Foundation." The first membership of that committee consisted of Jones, Haden, Ernestene, Gardner, Page, and Jordan. Although some staff members had misgivings, the plan was, on the whole, enthusiastically accepted. The plan provided that administration and policy were the responsibility of lay trustees and that the entire professional operation was the responsibility of a professional staff organization. It was then that Sherwin was elected president of the Clinic.

A member of the professional staff observed many years later that one of the most extraordinary events in the Clinic's history took place at that time. Without salary or remuneration of any kind, the Executive Committee of the Board of Trustees, and Sherwin in particular, devoted many hours a week to meeting with representatives of the professional staff and with the management consultants. The issue was how to manage the Clinic. All of the board members were busy executives with full-time careers of their own. At that critical time, they were not figurehead trustees. They shouldered the full responsibility of their office, bringing to it the organizational skills, the patience, and the understanding that characterize top-flight executives. To these men, the Clinic owes an enormous debt of gratitude. The trustees became more active in Clinic affairs than previously, in an effort to establish better rapport with the staff. The Executive Committee of the trustees and the Professional Policy Committee held frequent joint meetings. Subcommittees of trustees and staff members considered many of the problems involving property, facilities, research budgets, and

the hospital. A fundamental feature of the new plan of organization was that committees established policies. For nine years this form of administration continued.

GRUMBLING AND UNREST

At the time of Daoust's death in 1947, there was little harmony among the members of the staff and no organization in which the democratic process could function. The president had been empowered to conduct the Clinic's business affairs; each department head was an autocrat in charge of the professional policies of his own department, and the sometimes tumultuous sessions of the Administrative Board have already been described. The composition of the board was altered in 1947, when Ruedemann resigned from the staff, and in 1949, when Haden retired and Jones died. Jones fell dead in the surgeons' locker room of a ruptured aneurysm of the heart. These events, though traumatic at the time, helped set the stage for the development of a more democratic organization of the professional staff.

Sometimes aging renders leaders too rigid in outlook. Several persons remaining in key positions were in their sixties. In the early 1950s there was hardening of the lines of authority. One department chairman noted that it was impossible to run a department and, at the same time, win a popularity contest. Some of the younger members of the staff began to feel that there was no democratic process allowing them to register either protests or preferences. In those days, one of the ethical principles of the American Medical Association stated that "a physician should not dispose of his professional attainment or services to a hospital, body, or organization, group or individual by whatever name called or however organized under terms or conditions which permit exploitation of the physician for financial profit of the agency concerned." This historic principle made it unethical for any physician to permit a third party to intervene in the relationship between the doctor and his patient. Members of the staff were also members of the American Medical Association, and some began to feel insecure under a plan of organization that seemed sometimes to infringe upon this ethical principle. The complex relationships among the consumer, provider, and payer that now characterize American health care were only foreshadowed in the 1950s.

With the purpose of investigating this and related problems, the trustees of the Clinic and the Professional Policy Committee met on October 13, 1954, at which time they appointed a Medical Survey Committee.¹ After several months of careful deliberation and consultation with every member of the staff, the Medical Survey Committee issued a report recommending changes in both administrative and professional affairs of the Foundation.

The preamble of the report states that "The Cleveland Clinic Foundation is celebrating its 34th Anniversary this year (1954). Under the leadership of its four dynamic founders it pioneered in the practice of group medicine and laid the groundwork that has brought it world renown. Many changes have taken place since the Clinic's founding days. Its physical plant has expanded immeasurably and is in the process of further expansion. From the original four men has grown a medical staff approaching 100. Instead of four successful rugged individualists, the staff now consists of 25 times that number, perhaps less successful, perhaps less rugged, but nonetheless individualist. In many organizations faced with the loss of the leaders who were their creators, a time for appraisal comes somewhere around the 30th year of their history. It is desirable to pause then for some serious thought as to whether the institution continues to carry on the ideals which made it great, and if so, whether it is doing only that or is actually continuing to aggressively meet the challenge of the future."

The Medical Survey Committee suggested that many of the Clinic's problems could be solved if the trustees delegated certain responsibilities to an elected Board of Governors composed of members of the professional staff. They recommended that a Planning Committee of trustees and staff be charged to study the administrative structure of the Clinic.

The Medical Survey Committee identified administrative and medical practice issues they felt were critical to the continued success of the Clinic's development. The report recommended that:

- the government of The Cleveland Clinic Foundation must become more democratic, so that every member of the staff will feel a greater responsibility for the welfare of the institution and have a more definite stake in its future;
- the legal status of the Clinic must be clarified;
- the Clinic research and educational programs must be reevaluated and strengthened where possible, since the professional emi-

nence of the institution depends in large measure upon their accomplishments;

- the financial well-being of the professional staff must be evaluated to determine whether or not it is adequate;
- the Clinic should evaluate the medical needs of the area served, and modify its services to fit these needs;
- the Clinic must make a vigorous effort to improve its relations with patients and with physicians both in local and outlying areas;
- the Clinic must increase its efforts to keep the public informed about its services, facilities, and achievements;
- patient care in the Cleveland Clinic Hospital must be improved.

The Planning Committee met frequently during the summer of 1955, and as a result of its deliberations the Board of Trustees adopted a new plan of organization. The new organization provided that all professional matters pertaining to the practice of medicine be under the jurisdiction of the Board of Governors. Provision was made also to form elected committees within the divisions of medicine, surgery, and pathology. The plan also proposed formation of committees for research, the hospital, properties, education, and planning. The committees would be composed of trustees and members of the professional staff.

The divisional committees were to manage the professional affairs within their respective domains under the authority of a Board of Governors. During the early deliberations of the Planning Committee, it became quite clear that there were certain ancillary professional services that could not be separated from professional responsibility. These areas included the central appointment desk, routing desk (including information and patient registration), professional service personnel (including clinic nurses, medical secretaries, and desk receptionists), records and statistics, telephone operators, and patient relations.

The work of the Planning Committee was greatly facilitated by a study of the structure and operation of the Mayo Clinic, in which a board of governors had been the responsible body of government since 1919. From this study, with due regard for the differences that existed between the two institutions, a plan of organization was developed and adapted to the corporate structure of the Cleveland Clinic. The proposed plan delegated responsibility for medical practice to a Board of Governors to be composed of seven members of the professional

staff. These were to be elected by the staff for staggered terms of five years. To prevent self-perpetuation, no member would be eligible for re-election for one year after expiration of the term. To prevent election of members of the board by cliques, an indirect method was devised. Each year, the staff would elect a Nominating Committee. After deliberation, this committee would nominate a member of the staff to fill each vacancy. The entire staff would then vote on the nominees, and if 60 percent approved each candidate, he or she would be elected. Only twice in the years since this system was introduced has the staff failed to support the nominating committee's candidates.

The Board of Governors was given authority to select and appoint new members of the staff, but the setting of the salaries for these and all other members of the staff remained a function of the Compensation Committee of the Board of Trustees. To aid this committee in evaluating the performance of each member of the staff, the Board of Governors was authorized to discuss each member and rate his or her performance. The focus of the evaluation was not to be only the number of patients seen or money earned, but also his or her scientific and other achievements, so that, in effect, the performance of each staff member would be judged by peers.

On the professional side, an effort was made to diminish the authority of the chiefs and to encourage individual initiative. Thus, the Chiefs of Medicine and Surgery, who previously had absolute authority in their divisions, became chairmen, respectively, of the Medical and the Surgical Committees that were elected annually by the members of their respective divisions. The Board of Governors appointed these chairmen for a period of one year, but almost without exception the appointments were renewed annually. Short of illness or mismanagement, the divisional chairmen had what amounted to tenure in their offices. Yet they did not have total control, for they had no authority to act completely independently of their committees. They could be out-voted. Moreover, the actions of the committees were subject to review by the Board of Governors. This afforded protection to the individual staff member from capricious or unfair treatment by the chiefs.

Since the Division of Research was supported by endowment funds, earnings of the Clinic, and outside grants, its administrative problems were to be the responsibility of the Board of Trustees. For this purpose, the Committee on Research Policy and Administration

was established. A Research Projects Committee, appointed by the Board of Governors from the members of the Division of Research and from members of the clinical divisions who had special knowledge of or interest in research problems, was put in control of all research projects undertaken by members of the clinical divisions. The long-range program of research, devoted largely to the study of hypertension and arteriosclerosis, remained under the control of the Director of Research, Dr. Irvine H. Page, who reported only to the Board of Trustees. It was not until 1969 that the Division of Research was brought under the control of the Board of Governors.

As a memorial to Bunts, an educational foundation was established and named for him some years after his death. The Bunts Fund, established shortly after Bunts's death in 1928, was changed to an education fund in 1935 at the time the educational foundation was created. The same Board of Trustees that directed The Cleveland Clinic Foundation also directed the Cleveland Clinic Educational Foundation. The original endowments and also the profits of the Cleveland Clinic Pharmacy (incorporated as a taxable, profit-making company) supported the Educational Foundation.

The report of the Planning Committee was a significant document that addressed many issues and had far-reaching consequences. The months of effort in 1955 were rewarded by a truly new system of governance for the Foundation. At a meeting of the professional staff it was unanimously recommended that the professional members of the Planning Committee nominate the first Board of Governors. The names of the nominees were sent to the staff for approval, and thus was created the first Board of Governors, composed of Drs. Fay A. LeFevre (chairman), William J. Engel (vice chairman), George Crile, Jr., A. Carlton Ernstene, W. James Gardner, E. Perry McCullagh, and Irvine H. Page. Dr. Walter J. Zeiter was elected executive secretary, and Mrs. Janet Winters Getz was elected recording secretary. The first meeting was held on Thursday, December 8, 1955, at 12:15 p.m. in the Board Room of the Main Clinic Building. In attendance by invitation were Richard A. Gottron, business manager of the Foundation, and James G. Harding, director of the Hospital. Thus began a new era.

¹ The members of the Medical Survey Committee were Mr. Richard A. Gottron (Chairman), Drs. Robin Anderson, Victor G. deWolfe, C. Robert Hughes, Alfred W. Humphries, Fay A. LeFevre, Ausey H. Robnett, John F. Whitman, Walter J. Zeiter, and Mr. Clarence M. Taylor (ex officio).